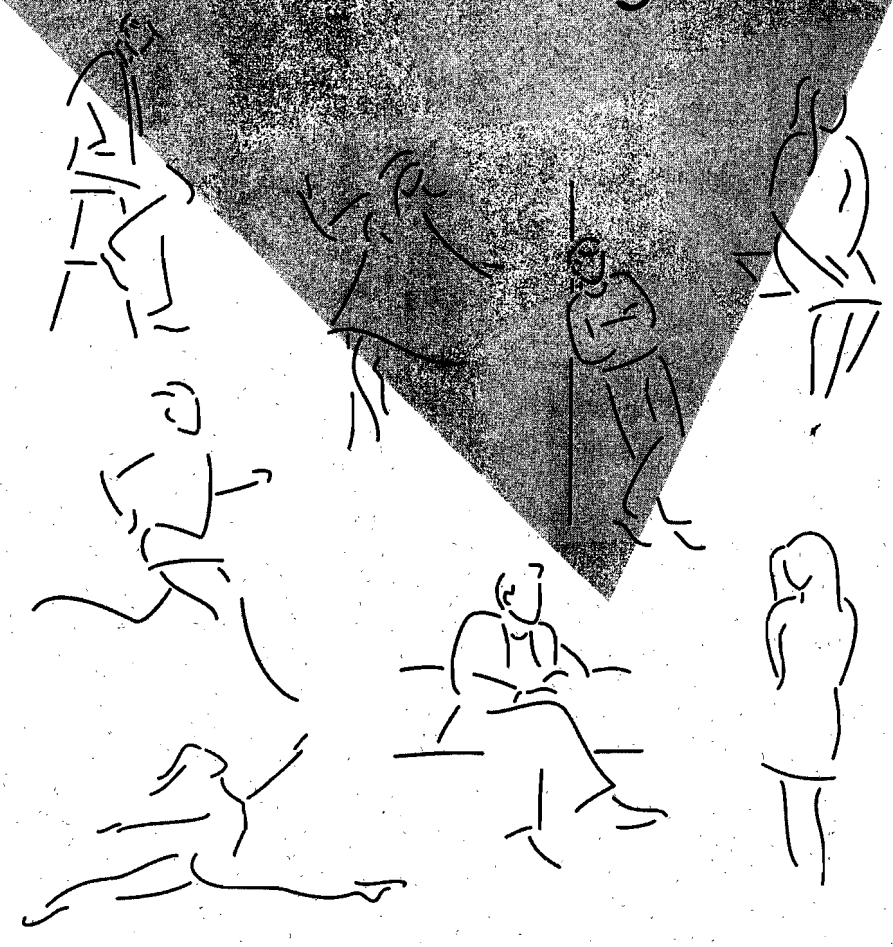
STATE of ALASKA

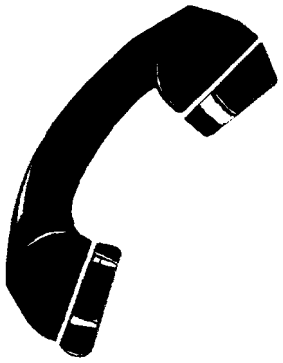
DEPARTMENT of HEALTH and SOCIAL SERVICES

Health Risks in Alaska Among Adults



Alaska Behavioral Risk Factor Survey

1994 Annual Report



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Alaska Behavioral Risk Factor Survey

1994 Annual Report

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National Year 2000 Health Objectives, along with background information pertaining to the health risks as reported in this document are found in Healthy People 2000, National Health Promotion and Disease Prevention Objectives; U.S. Department of Health and Human Services, Public Health Service, DHHS, Publication No. (PHS) 91-50212. Healthy People 2000 is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C.

Contents

Appendices

Tables

Introduction

In recent years, both health professionals and the general public have shown increased interest in how behavioral changes can reduce a person's risk for developing health problems. This interest results from growing evidence that lifestyle strongly influences health. Behaviors linked to health problems are referred to as behavioral risk factors, and they include such things as cigarette smoking, being overweight, alcohol use, having a sedentary lifestyle, not using seat belts and more.

Behavioral risk factors are associated with the ten leading causes of death in the United States and Alaska. Many chronic diseases (such as heart disease, cancer and diabetes) and premature deaths could be prevented through better control of these behavioral risk factors.

Data on behavioral risk factors are necessary for formulating intervention strategies, justifying resources to support these strategies, and proposing new policies or legislation. Surveillance of behavioral risk factors allows us to monitor trends in health behavior and particularly enables us to measure progress toward reaching the "Healthy People 2000, Health Promotion and Disease Prevention Objectives" for the nation. It can also provide the basis for launching and evaluating programs designed to reduce the prevalence of unhealthy behaviors and attain Year 2000 health goals.

Since 1981, the Centers for Disease Control and Prevention (CDC) has helped states survey adults about their health behaviors, by conducting one time telephone surveys. In 1984, CDC initiated the Behavioral Risk Factor Surveillance System (BRFSS), by which 17 states began collecting behavioral risk data through monthly telephone surveys.

The Behavioral Risk Factor Surveillance System was implemented in Alaska in the Fall of 1990, when a Point-in-Time Survey of 400 residents was conducted. In 1991, the Alaska Behavioral Risk Factor Surveillance System became part of an ongoing surveillance system, conducting telephone surveys monthly. Each month, 128 adults, ages 18 and older are interviewed regarding their health and day to day living habits.

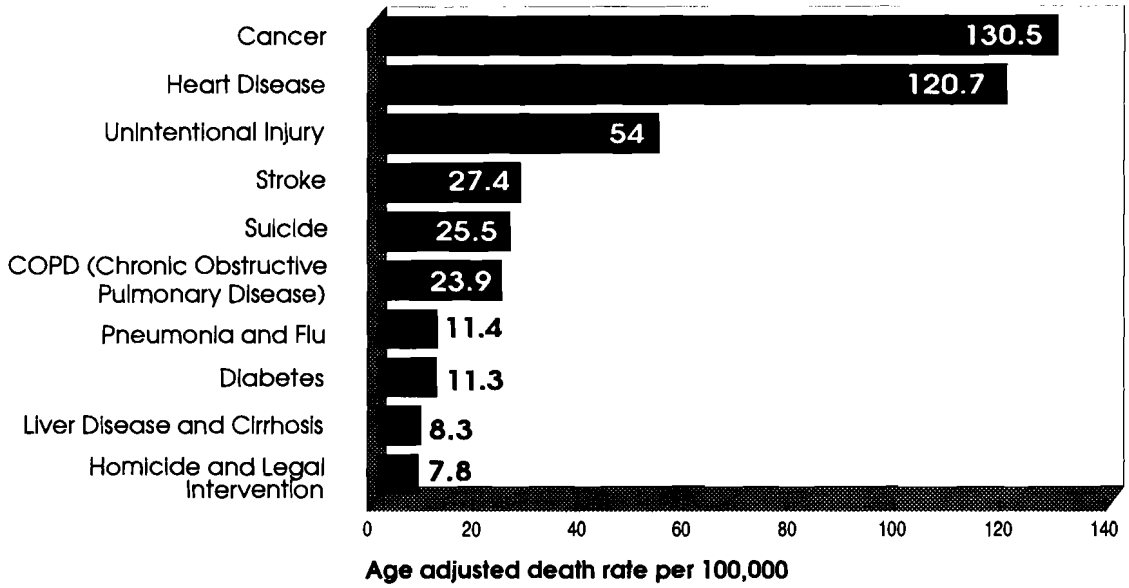
This report contains the 1994 survey results. These surveys were conducted from January through December, 1994, for a total sample size of 1,535 interviews. The Division of Public Health, BRFSS continues to conduct monthly telephone surveys each year.

The ten leading causes of death and the changeable risk factors associated with them

Behavioral Risk Factors	Heart Disease	Cancers	Stroke	Injuries (nonvehicular)	Influenza/Pneumonia	Injuries (vehicular)	Diabetes	Cirrhosis	Suicide	Homicides	AIDS
	Leading Causes of Death										
Smoking	●	●	●	●							
High blood pressure	●		●								
High cholesterol	●										
Diet	●	●					●				
Obesity	●	●					●				
Lack of exercise	●	●	●				●				
Stress	●		●	●		●			●	●	
Alcohol abuse		●		●		●		●	●	●	
Drug misuse	●		●	●		●		●	●	●	●
Safety belt nonuse						●					
Handgun possession				●					●	●	
Sexual practices											●

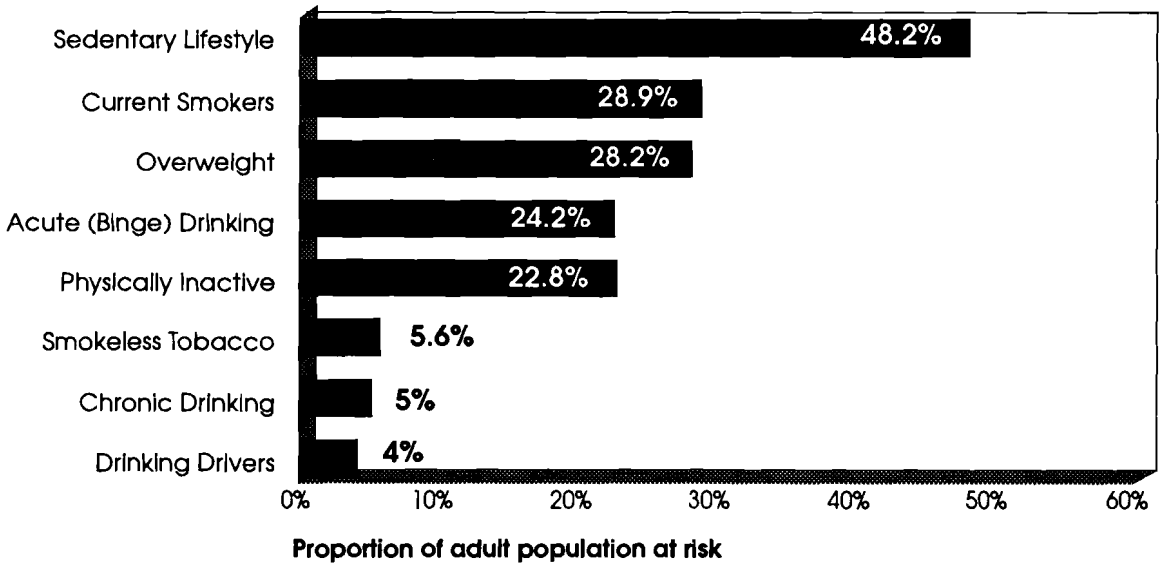
Source: Green, L.W., Kreuter, M.W.. *Health Promotion Planning: An Educational and Environmental Approach.* Mayfield 1991.

Leading Causes of Death in Alaska



Source: Alaska Bureau of Vital Statistics
1994 Annual Report

Behavioral Risk Factor Prevalence in Alaska



Methodology

The Behavioral Risk Factor Surveillance System is conducted by the State Division of Public Health in cooperation with the National Centers for Disease Control and Prevention. It is a monthly telephone survey that utilizes a standard protocol and interviewing methods developed by the CDC.

Sample Design

Although the main purpose of the BRFSS is to estimate the prevalence of behavioral risk factors in the general population, interviewing each person is not economically feasible. Thus, a probability (or random) sample is selected in which all persons have a known chance of selection. The BRFSS in Alaska uses a stratified random sampling design. The Alaska sample was stratified into four regions based on common demographics. An equal number of interviews are conducted from each region, which purposely oversamples the nonurban areas of Alaska. (See Appendix B)

Sample Size

Each month 128 Alaska residents age 18 and older are interviewed over the telephone regarding their health practices and day to day living habits, to reach an annual sample size of 1,536 (384 per region). The data in this report were collected from January through December, 1994, and are based on a sample size of 1,535 interviews.

Sampling Process

Since 1990, the telephone sample has been generated by the University of Alaska Anchorage, Institute of Social and Economic Research (ISER). In 1994, the Institute of Social and Economic Research used a combination method of computer random generation (using the RANDY method) for large exchanges and random selection from a database of entered directory numbers for small exchanges. (See Appendix G)

Survey Instrument

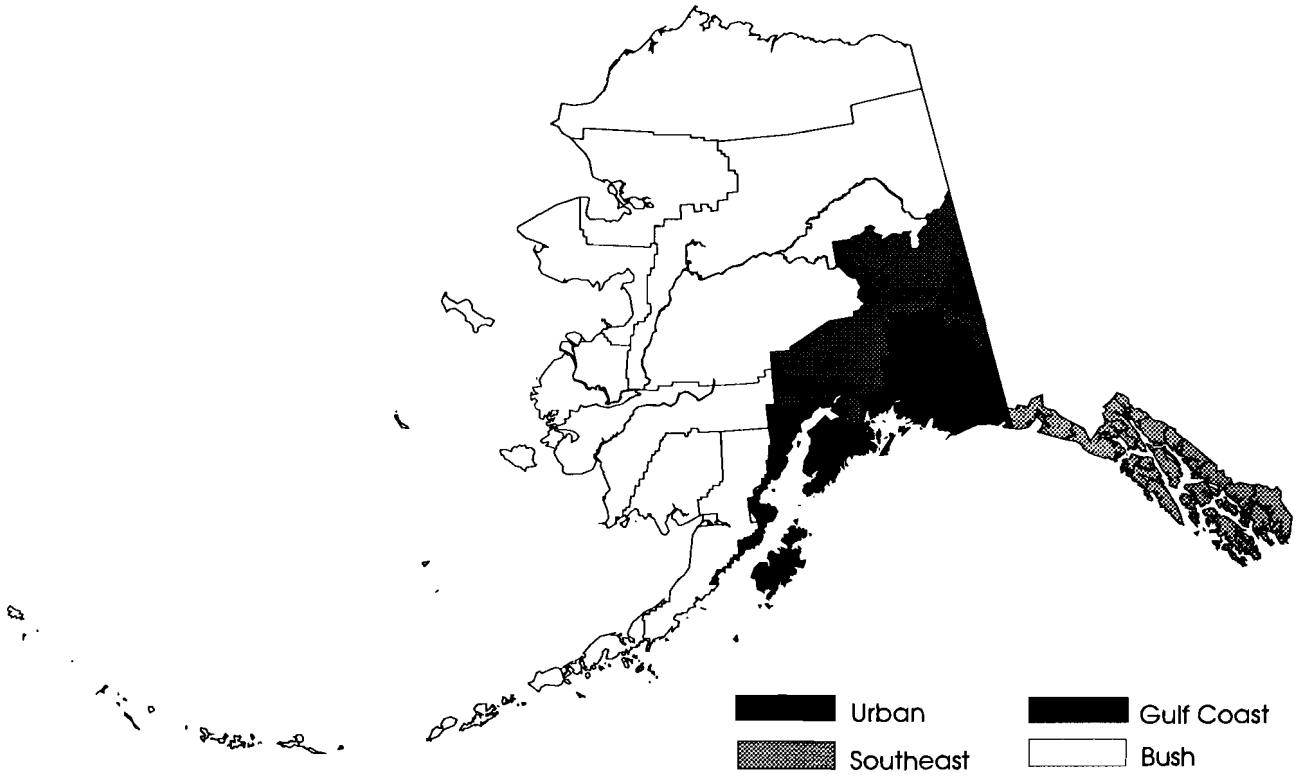
The BRFSS instrument is a standardized questionnaire which consists of three sections;

- the core (which includes demographics),
- a set of optional modules and
- state specific questions.

The 1994 questionnaire covered the topics of Tobacco Use, Alcohol Use, Routine Checkups, Diet, Physical Activity Levels, Weight Control, Diabetes, Breast and Cervical Cancer Screening, Health Care Coverage, and AIDS Awareness.

Participation is random, anonymous and confidential. Respondents are randomly selected from among the adult members of the household. Only those living in households are surveyed. Those living in institutions (i.e. nursing homes, dormitories) are not surveyed.

1994 BRFSS Sampling Regions



The Alaska sample was stratified into four regions based on common demographics: ♦

	Total Population♦♦	Population 18 years and older	Number of interviews expected
Urban (Region 1) Anchorage, Fairbanks & vicinity	349,654	242,103	384
Gulf Coast (Region 2) Kenai, Kodiak, Valdez, Cordova & vicinity	64,063	43,574	384
Southeast (Region 3) All of Southeast Alaska	68,989	48,103	384
Bush (Region 4) All other nonurban areas of Alaska	67,337	43,393	384
STATEWIDE TOTAL	**550,043**	**377,173**	**1,536**

♦ See Appendix B

♦♦ 1990 Census Population

Data Collection

In 1994, interviews were conducted by trained college interns. The interviews were conducted primarily in the evenings and on weekends, during the two weeks of every month, specified by the CDC for all states.

Data was collected via computer using Ci3 standalone software. Monthly data files were sent to the Centers for Disease Control and Prevention for editing.

Data Analysis

The Behavioral Risk Factor Surveillance System (BRFSS) data contains information on Alaskan adults only (age 18 and above).

Data collected by BRFSS are edited by the CDC by applying a computerized algorithm. Edit reports are sent back to the state and corrections are returned to CDC. At the end of each survey year, data are compiled and weighted by CDC, and cross tabulations and prevalence reports are prepared.

Weighting: Unweighted data are the actual responses of each survey respondent. The data are weighted or adjusted to compensate for the overrepresentation or underrepresentation of persons in various subgroups. The data are further weighted to adjust the distribution of the sample data so that it reflects the total population of the sampled area. In 1994, survey results were weighted using 1990 Census data for Alaska. (See Appendix I)

Reporting: Data are analyzed by the CDC for Alaska by age, gender, race, marital status, income, employment and education. This report provides standard tables describing survey results based on age, gender, and education. Due to data collection problems in 1994, income data is not available and not reported.

Comparisons

All prevalence comparisons made to the National BRFSS Ranges and the National BRFSS Median are comparisons made to the 50 states (49 states plus the District of Columbia) participating in the Behavioral Risk Factor Surveillance System in 1994.

Limitations

The BRFSS uses telephone interviewing for several reasons. Telephone interviews are faster and less expensive than face to face interviews Calls are made from one central location (Juneau) and are monitored for quality control.

The one main limitation of any telephone survey is that those people without phones cannot be reached and are not represented. In Alaska, about 92% of households have phones (about 93% of all U.S. households have phones). However, the percentage of households with a telephone varies by region in Alaska (see Appendix F). In general, persons of low socioeconomic status are less likely than persons of higher socioeconomic status to have phones and are undersampled.

However, survey results (nationally) from the BRFSS correspond well with findings from other surveys conducted in person.

Some inaccuracy is expected from any survey based on self reported information and the potential for bias must be kept in mind when interpreting results.

Survey response rates may also affect the potential for bias in the data, however, in general the Alaska survey response rates were favorable. (See Appendix H)

The reliability of a prevalence estimate depends on the actual, unweighted number of respondents in a category or demographic subgroup (not a weighted number). Interpreting and reporting weighted numbers that are based on a small, unweighted number of respondents can be misleading. The degree of precision increases if the sample size is larger and decreases if the sample size is smaller. In this report, prevalence estimates are not reported for those categories in which there were less than 50 respondents and are rounded to the nearest whole percent when the denominator is less than 500.

Table 1 on the following page describes the sample population and should be used as a basis for understanding the tables in this report.

Table 1

Survey Population by Selected Demographics

Alaska BRFSS 1994

	n	%	Weighted N
Gender			
Male	723	53.2	200,573
Female	812	46.8	176,600
Age			
18-24	129	15.0	56,639
25-34	357	30.1	113,516
35-44	493	27.1	102,337
45-54	278	14.1	53,244
55-64	147	7.9	29,819
65+	129	5.7	21,507
Unknown or Refused	2	0.0	111
Education			
Never Attended School	15	0.7	2,625
Elementary	56	2.7	10,047
Some High School	108	7.1	26,839
High School Graduate or GED	483	28.6	107,835
Some College or Technical School	493	35.3	133,054
College Graduate	375	25.2	95,160
Unknown/Refused	5	0.4	1,613
TOTAL	**1,535**	**100**	**377,173**

n = Number of survey respondents in this demographic subgroup. Total sample size = 1,535.

% = This is a weighted (adjusted) percentage of the state population (adult) in this demographic subgroup, based on the survey data.

Weighted N = Weighted sample number, generalized to the state's 1990 census population size.

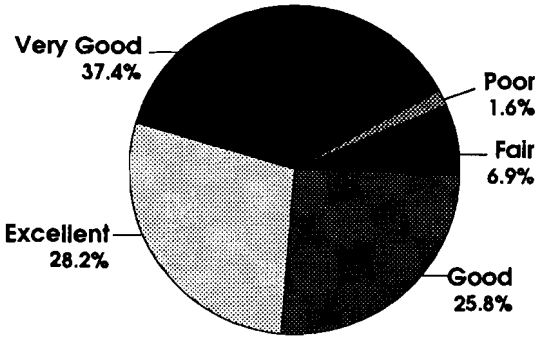
Quality of Life

A fundamental goal of the Year 2000 national health objectives is to increase the span of healthy life for all persons in the United States. Although the average life expectancy of Americans has increased to 75 years, for some persons, increased life expectancy includes periods of diminished health and functions (lowered health-related quality of life). In general, population based information on good health has been limited. In recent years, questions to assess the health related quality of life have been added to the BRFSS.

Self Reported Health Status of Alaskans

General health status: In 1994, 65.6% of Alaskan adults rated their own health as excellent or good. Only 8.5% of Alaskans rated their health as fair or poor. (National BRFSS Range 8.5 - 21.82%, National BRFSS Median 12.76%). Of those surveyed, 28.2% rated their health excellent, 37.4% as very good, 25.8% as good, 6.9% as fair and 1.6% as poor.

How Alaskans Rate Their Own Health



Recent physical health: Alaskan adults reported an average of 2.3 days out of the past 30 days when their physical health was not good. (National BRFSS Range 1.57 - 3.79 days, National BRFSS Median 2.85 days). Alaskan males reported an average of 2.06 days during the past month when their physical health was not good. Alaskan females reported an average of 2.57 days during the past month when their physical health was not good.

Recent mental health: Alaskan adults reported an average of 2.87 days out of the past 30 days when their mental health was not good. (National BRFSS Range 1.46 - 4.19 days, National BRFSS Median 2.88 days). Alaskan males reported an average of 2.22 days during the past month when their mental health was not good. Alaskan females reported an average of 3.62 days during the past month when their mental health was not good.

Recent activity limitations: Alaskan adults reported an average of 1.24 days during the past 30 days when their usual activities were limited due to their physical or mental health. (National BRFSS Range 0.85 - 2.57 days, National BRFSS Median 1.53 days) Alaskan males reported an average of 1.05 days when their activities were limited during the past month and Alaskan females reported an average of 1.46 days when their activities were limited during the past month.

Year 2000 National Health Objective

Increase years of healthy life to at least 65 years. (Objective 8.1)

Risk Factors

Alcohol Use

Health Risk

Alcohol is implicated in nearly half of all deaths caused by motor vehicle crashes and fatal intentional injuries such as suicides and homicides; and victims are intoxicated in approximately one-third of all homicides, drownings, and boating deaths. Alcohol is the principal contributor to cirrhosis, which is the ninth leading cause of death in the United States. From 1992-1994, alcohol accounted for 11.2% of the deaths in Alaska.

Alcohol use during pregnancy is the leading preventable cause of birth defects. Alcohol and other drug abuse may be both a cause and an effect of homelessness.

Alcohol Use in Alaska

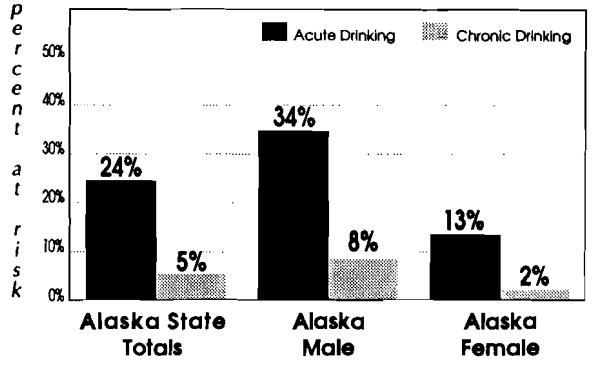
Definitions used in this survey:

Acute (Binge) Drinking: *Respondents who report having five or more drinks on an occasion, one or more times in the past month.*

Chronic Drinking: *Respondents who report an average of 60 or more alcoholic drinks a month.*

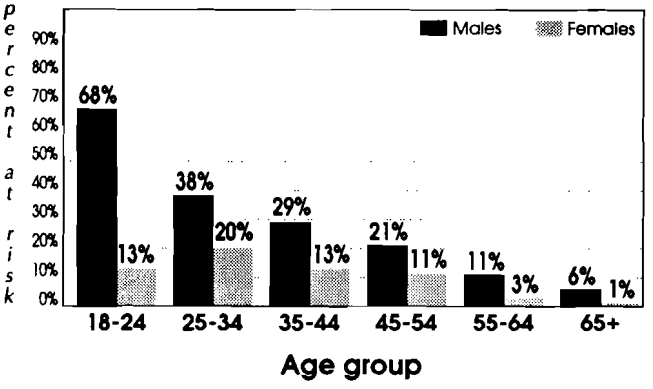
Drinking and Driving: *Respondents who report having driven after having too much to drink, one or more times in the past month.*

Comparison of Risk Prevalence for Alchohol Use



At Risk for Acute Drinking in Alaska

By age and gender



In 1994, 65.2% of those surveyed, reported drinking alcohol in the past month. Among males, 73% reported drinking alcohol in the past month, and among females, 56.5% reported drinking alcohol in the past month.

An estimated 24.2% of Alaskan adults engaged in acute (binge) drinking. Of the males, 33.9% engaged in binge drinking and of the females 13.2% engaged in binge drinking. Men are more likely than women to engage in binge drinking in every age group over 18.

An estimated 5.0% of Alaskan adults were at risk for chronic drinking. Of males, 7.9% had more than 60 drinks during the past month and of females, 1.7% had more than 60 drinks during the past month.

An estimated 4.0% of Alaskan adults engaged in drinking and driving during the past month. Of men, 6.0% reported drinking and driving during the past month and of women, 1.8% reported the same thing.

Year 2000 National Health Objectives

The Year 2000 Health Objectives relate to health status, risk reduction, and service and protection to reduce alcohol and other drug problems. The health objectives do not relate to alcohol consumption as defined by the 1994 BRFSS.

Table 2

Prevalence of Acute (Binge) Drinking by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	223	33.9	723
Female	97	13.2	812
Age			
18-24	43	43	129
25-34	100	29	357
35-44	108	22	493
45-54	53	17	278
55-64	10	7	147
65+	6	3	129
Unknown or Refused	—	—	2
Education			
Never Attended School	2	◆◆	15
Elementary	8	8	56
Some High School	35	33	108
High School Graduate or GED	117	28	483
Some College or Technical School	101	27	493
College Graduate	57	15	375
Unknown/Refused	—	—	5
TOTAL	**320**	**24.2**	**1,535**

95% Confidence Interval (20.9 - 27.6%)

◆◆ = Not Reported

n = Number of respondents who have had five or more drinks on an occasion, one or more times in the past month.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Table 3

Prevalence of Chronic Drinking by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	49	7.9	723
Female	13	1.7	812
Age			
18-24	4	8	129
25-34	15	5	357
35-44	21	5	493
45-54	16	6	278
55-64	3	1	147
65+	3	4	129
Unknown or Refused	—	—	2
Education			
Never Attended School	—	—	15
Elementary	2	2	56
Some High School	4	5	108
High School Graduate or GED	28	6	483
Some College or Technical School	18	6	493
College Graduate	10	3	375
Unknown/Refused	—	—	5
TOTAL	**62**	**5.0**	**1,535**

95% Confidence Interval (3.3% - 6.8%)

n = Number of respondents who have had an average of 60 or more alcoholic drinks during the past month.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Table 4

Prevalence of Drinking and Driving by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	35	6.0	723
Female	17	1.8	812
Age			
18-24	9	10	129
25-34	16	5	357
35-44	16	3	493
45-54	8	2	278
55-64	1	<1	147
65+	2	1	129
Unknown or Refused	—	—	2

	n	%	N
Education			
Never Attended School	—	—	15
Elementary	—	—	56
Some High School	7	6	108
High School Graduate or GED	21	6	483
Some College or Technical School	16	4	493
College Graduate	8	3	375
Unknown/Refused	—	—	5
TOTAL	**52**	**4.0**	**1,535**

95% Confidence Interval (2.4% - 5.6%)

n = Number of respondents who report having driven after having too much to drink, one or more times in the past month.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Diabetes Awareness

Health Risk

Diabetes, a chronic and potentially disabling disease, is characterized by elevated blood glucose levels. Diabetes is caused by either a deficiency of insulin or a decreased ability of the body to use insulin. Diabetes can be classed into two main types: non-insulin dependent diabetes mellitus (NIDDM) and insulin dependent diabetes mellitus (IDDM). The most common type is NIDDM. It affects 90% of those with diabetes and usually appears after the age of 40 years. There is nor cure for diabetes. If undetected or not properly treated, diabetes can result in physical damage that is seldom reversible. People with diabetes are at increased risk for heart disease, blindness, kidney failure, and non-traumatic lower extremity amputation.

In 1995, about 16 million people in the United States had diabetes, but only 8 million had been diagnosed. Minorities, especially Native Americans, African Americans and Hispanics have a must greater risk of developing diabetes. Although diabetes can occur among any age group and ethnicity, the elderly are disproportionately affected by diabetes. More than 10% of elderly adults in the United States have been diagnosed with diabetes.

Early detection of diabetes along with emphasis of glucose control facilitated by diabetes education can reduce the burden of diabetes. Ongoing diabetes management, including blood glucose monitoring, regular physical activity, and meal planning, are essential to maintaining health. In many cases, oral medications or insulin injections are also required for maintaining glucose control.

Diabetes in Alaska

Among Alaskan adults, 3.1% reported being told by a doctor that they had diabetes. Among men, 3.1% report being told that they had diabetes and among women 3.0% report being told that they had diabetes. Among women, 0.4% report being told they had diabetes during pregnancy.

Table 5

Prevalence of Diabetes Awareness by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	24	3.1	723
Female	29	3.0	812
Age			
18-24	2	1	129
25-34	6	2	357
35-44	10	1	493
45-54	13	6	278
55-64	5	4	147
65+	16	15	129
Unknown or Refused	1	◆◆	2
Education			
Never Attended School	—	—	15
Elementary	6	12	56
Some High School	6	4	108
High School Graduate or GED	11	3	483
Some College or Technical School	21	3	493
College Graduate	8	2	375
Unknown/Refused	1	◆◆	5
TOTAL	**53**	**3.1**	**1,535**

95% Confidence Interval (1.9 - 4.2%)

◆◆ = Not Reported

n = Number of respondents who report ever told by a doctor that they have diabetes

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Nutrition

Health Risk

Dietary factors are associated with five of the ten leading causes of death, including coronary heart disease, some types of cancer, stroke, noninsulin-dependent diabetes mellitus and atherosclerosis.

The Dietary Guidelines for Americans (1995) recommend that one should do the following to stay healthy:

- eat a variety of foods,
- balance the food you eat with physical activity-maintain or improve your current weight,
- choose a diet with plenty of grain products, vegetables, and fruits,
- choose a diet low in fat, saturated fat, and cholesterol,
- choose a diet moderate in sugars, salt and sodium, and
- if you drink, do so in moderation.

Consumption of fruits and vegetables may reduce the risk of chronic diseases including some types of cancer, heart disease and stroke.

Fruit and Vegetable Consumption In Alaska

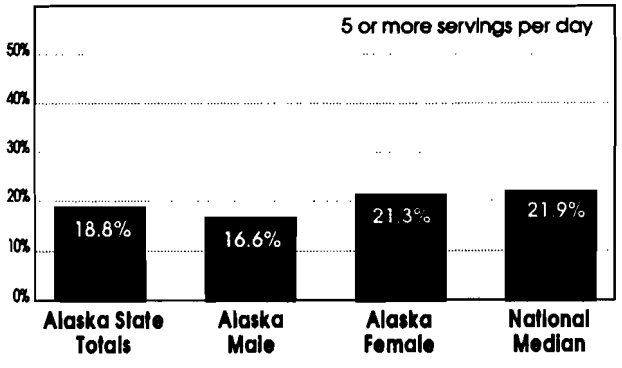
Only 18.8% of Alaskan adults consumed five or more servings of fruits and vegetables per day (National BRFSS Range 13.87 to 33.52%, National BRFSS Median 21.99%). More females (21.3%) than males (16.6%) consumed fruits and vegetables five or more times per day. Among Alaskan adults, about 3% ate less than one serving of fruits and vegetables a day, 35% ate one to two servings daily and 43% ate three to four servings daily.

Year 2000 National Health Objectives

Reduce dietary fat intake to an average of 30% of calories or less and average saturated fat intake to less than 10% of calories among people aged two and older. (Objective 2.5)

Increase complex carbohydrate and fiber containing foods in the diets of adults to five or more daily servings for fruits and vegetables, and to six or more daily servings for grain products. (Objective 2.6)

Comparison of Prevalence for Fruit and Vegetable Consumption



National BRFSS Range 13.87 - 33.52%, Median 21.99%

Overweight

Health Risk

Overweight is associated with high blood cholesterol, high blood pressure, and diabetes and is an independent risk factor for heart disease. Overweight also increases the risk for gall bladder disease and certain types of cancers.

Studies reveal that reduction in body weight can lower blood pressure and improve blood cholesterol levels in overweight individuals and in individuals who have high blood pressure or blood cholesterol.

Overweight in Alaska

Two definitions were used for this survey:

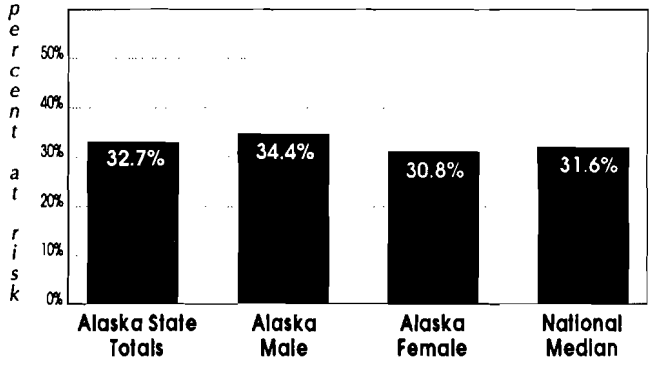
Overweight (1): *Respondents at or above 120% of ideal weight. Ideal weight is defined as the mid-value of a medium frame person from the 1959 Metropolitan Life Insurance Tables.*

Overweight (2): *Females with body mass index [weight in kilograms divided by height in meters squared (w/h **2)]>=27.3 and males with body mass index >=27.8.*

According to definition (1), based on percent of median, 32.7% of Alaskan adults were overweight (National BRFSS Range 23.70 to 36.53%, National BRFSS Median 31.60%). Among men, 34.4% were overweight and among women, 30.8% were overweight.

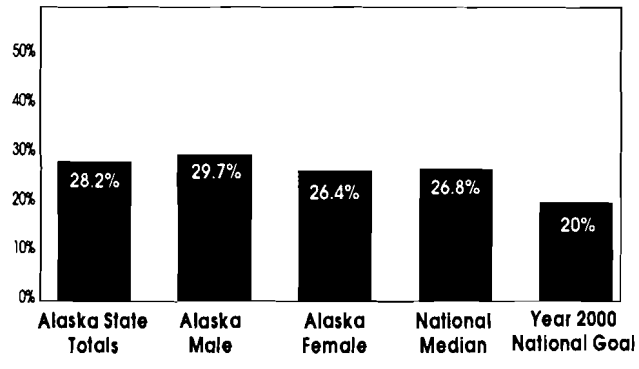
According to definition (2), based on body mass index, 28.2% of Alaskans were overweight (National BRFSS Range 19.71 to 31.93%, National BRFSS Median 26.75%). Among men, 29.7% were overweight and among women, 26.4% were overweight. This is slightly higher than the Year 2000 goal of 20%.

Comparison of Risk Prevalence for Overweight (1)



National BRFSS Range 23.70 - 36.53%, Median 31.60%

Comparison of Risk Prevalence for Overweight (2)



National BRFSS Range 19.71 - 31.93%, Median 26.75%

Weight Control in Alaska

During 1994, 34.9% of Alaskan adults reported they were trying to lose weight. Among men, 25.7% were trying to lose weight and among women, 45% were trying to lose weight. Of those who were not trying to lose weight, 43.8% were trying to keep from gaining weight (maintaining current weight). Of those surveyed, 8% reported being advised by a health professional in the past month to lose weight. Of those trying to lose weight or maintain their current weight, 12% were eating fewer calories, 47% were eating less fat and 22% were eating fewer calories and less fat. Of those trying to lose weight or maintain their current weight, 66% were using physical activity or exercise to lose or maintain their weight.

Of the people surveyed who were overweight based on body mass index, 44% were eating fewer calories and/or less fat and exercising to lose weight (National BRFSS Range 24.04 to 53.07%, National BRFSS Median 39.08%).

Year 2000 National Health Objective

Reduce overweight to a prevalence of no more than 20% among people aged 20 and older, and no more than 15% among adolescents aged 12 to 19 (based on body mass index). (Objective 2.3)

Table 6

Prevalence of Overweight (1) by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	257	34.4	723
Female	285	30.8	812
Age			
18-24	32	24	129
25-34	96	25	357
35-44	168	34	493
45-54	117	42	278
55-64	65	42	147
65+	64	52	129
Unknown or Refused	—	—	2

	n	%	N
Education			
Never Attended School	3	◆◆	15
Elementary	29	38	56
Some High School	37	30	108
High School Graduate or GED	175	36	483
Some College or Technical School	195	36	493
College Graduate	102	25	375
Unknown/Refused	1	◆◆	5
TOTAL	**542**	**32.7**	**1,535**

95% Confidence Interval (29.2 - 36.2%)

◆◆ = Not Reported

n = Number of respondents who are overweight based on percent of ideal weight.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Table 7

Prevalence of Overweight (2) by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	223	29.7	723
Female	252	26.4	812
Age			
18-24	28	20	129
25-34	83	21	357
35-44	147	29	493
45-54	103	38	278
55-64	57	37	147
65+	57	45	129
Unknown or Refused	—	—	2

	n	%	N
Education			
Never Attended School	3	◆◆	15
Elementary	28	30	56
Some High School	34	28	108
High School Graduate or GED	152	31	483
Some College or Technical School	167	31	493
College Graduate	90	22	375
Unknown/Refused	1	◆◆	5
TOTAL	**475**	**28.2**	**1,535**

95% Confidence Interval (24.8 - 31.5%)

◆◆ = Not Reported

n = Number of respondents who are overweight based on Body Mass Index (BMI).

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Physical Activity and Sedentary Lifestyle

Health Risk

The health benefits of physical activity are significant. Regular physical activity reduces the risk of premature death in general and in particular greatly reduces the risk of dying from coronary heart disease, the second leading cause of death in Alaska. Physical activity also reduces the risk of developing diabetes, hypertension, and colon cancer. In addition, physical activity enhances mental health, fosters healthy muscles, bones and joints and helps maintain function and preserve independence in older adults.

Sedentary Lifestyle In Alaska

Definitions for this survey:

Sedentary Lifestyle: *Respondents who report no physical activity or a physical activity or pair of physical activities that were done for 20 minutes or less, fewer than three times per week.*

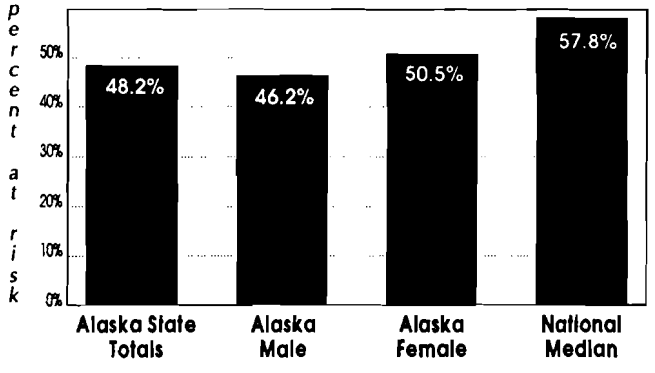
No Physical Activity *(Physically Inactive): Respondents who report no leisure time physical activity during the past month.*

In 1994, approximately half of Alaskan adults or 48.2% had a sedentary lifestyle (National BRFSS Range 47.51 to 73.58%, National BRFSS Median 57.79%). Of males, 46.2% were sedentary and of females, 50.5% were sedentary.

The proportion of adults that reported no leisure time physical activity was 22.8% (National BRFSS Range 17.16 to 48.60%, National BRFSS Median 28.77%). Of males, 21.8% reported being physically inactive and 24.0% of females reported being physically inactive.

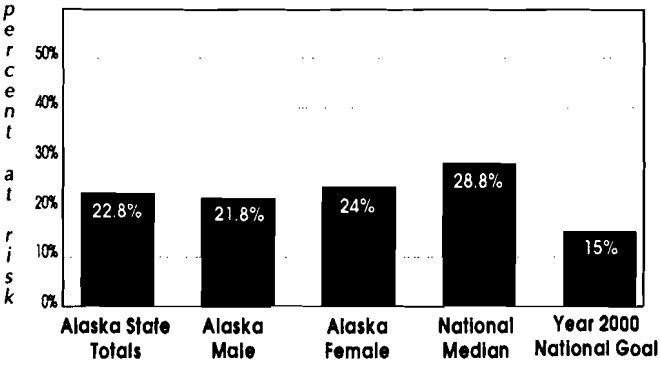
The proportion of adults that reported exercising on an irregular basis was 25.4%. The proportion of adults that reported engaging in regular but not vigorous exercise was 36.7% and the proportion of adults that engaged in regular and vigorous exercise was 15.1% (National BRFSS Range 8.69 to 19.98%, National BRFSS Median 14.13%).

Comparison of Risk Prevalence for Sedentary Lifestyle



National BRFSS Range 47.51 - 73.58%, Median 57.79%

Comparison of Risk Prevalence for No Physical Activity



National BRFSS Range 17.16 - 48.60%, Median 28.77%

The proportion of adults that reported engaging in regular and sustained exercise was 28.3% (National BRFSS Range 11.56 to 28.27%, National BRFSS Median 20.16%). Of males, 30% engaged in regular and sustained exercise and 26.3% of females engaged in regular and sustained exercise.

Year 2000 National Health Objectives

Increase to at least 30% the proportion of people aged six and older who engage regularly, preferably daily, in light to moderate physical activity for at least 30 minutes a day (Objective 1.3)

Increase to at least 20% the proportion of people aged 18 and older and to at least 75% the proportion of children and adolescents aged 6 – 17 who engage in vigorous physical activity that promotes the development of cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion. (Objective 1.4)

Reduce to no more than 15% the proportion of people aged six and older who engage in no leisure time physical activity (Objective 1.5)

Physical Activity Levels of Alaskan Adults

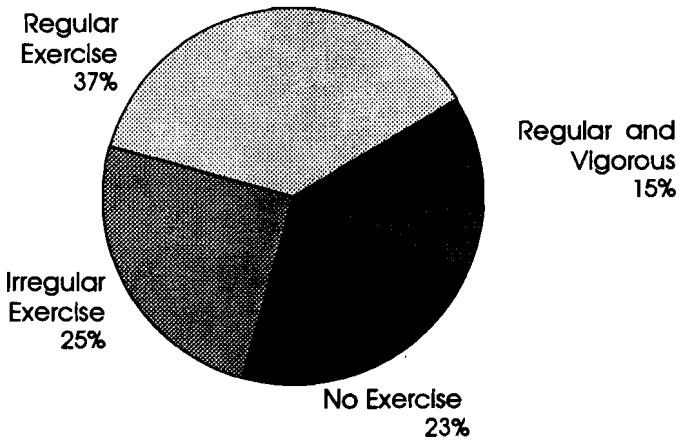


Table 8

Prevalence of Sedentary Lifestyle by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	362	46.2	723
Female	420	50.5	812
Age			
18-24	51	32	129
25-34	166	43	357
35-44	250	53	493
45-54	145	49	278
55-64	94	66	147
65+	74	68	129
Unknown or Refused	2	◆◆	2
Education			
Never Attended School	6	◆◆	15
Elementary	45	90	56
Some High School	66	65	108
High School Graduate or GED	261	49	483
Some College or Technical School	243	45	493
College Graduate	158	44	375
Unknown/Refused	3	◆◆	5
TOTAL	**782**	**48.2**	**1,535**

95% Confidence Interval (44.5 - 51.9%)

◆◆ = Not Reported

n = Number of respondents who report no leisure time physical activity or irregular physical activity.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Table 9

Prevalence of Physically Inactive by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	186	21.8	723
Female	205	24.0	812
Age			
18-24	22	14	129
25-34	71	21	357
35-44	114	24	493
45-54	85	23	278
55-64	48	28	147
65+	49	46	129
Unknown or Refused	2	◆◆	2

	n	%	N
Education			
Never Attended School	4	◆◆	15
Elementary	33	67	56
Some High School	41	37	108
High School Graduate or GED	143	28	483
Some College or Technical School	107	18	493
College Graduate	61	15	375
Unknown/Refused	2	◆◆	5
TOTAL	**391**	**22.8**	**1,535**

95% Confidence Interval (19.8 - 25.9%)

◆◆ = Not Reported

n = Number of respondents who report no leisure time physical activity.

% = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Smoking

Health Risk

Tobacco use is the most important single preventable cause of death and disease in our society. Tobacco use is a major risk factor for diseases of the heart and blood vessels; chronic bronchitis and emphysema; cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder; and other problems such as respiratory infections and stomach ulcers. Cigarette smoking accounts for about 419,000 deaths in the United States each year. Smoking accounts for 21% of all coronary heart disease deaths, 87% of lung cancer deaths, and 30% of all cancer deaths. From 1992 to 1994, smoking accounted for 19.8% of the deaths in Alaska.

Cigarette smoking during pregnancy accounts for 20 to 30% of low birth weight babies, up to 14% of preterm deliveries, and about 10% of all infant deaths.

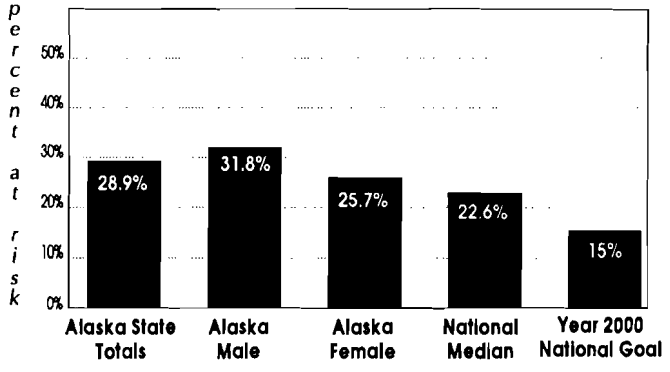
Smoking In Alaska

Definition of current smoking for this survey: Respondents who have smoked at least 100 cigarettes in their entire life and smoke now (regularly and irregularly).

Alaska had one of the highest prevalence rates of smoking in the country. Among Alaskan adults, 28.9% currently smoked cigarettes (National BRFSS Range 15.02 to 29.12%, National BRFSS Median 22.58%). It was higher among males (31.8%) than females (25.7%).

Over half of all the people surveyed (55.9%) had smoked at least 100 cigarettes in their lifetime. Of all the people who had smoked during their lifetime, approximately half (48.2%) had quit. Many (49%) former smokers quit smoking more than five years ago. Half (50%) of the current smokers had quit smoking for one day or longer within the last year.

Comparison of Risk Prevalence for Cigarette Smoking



National BRFSS Range 15.02 - 29.12%, Median 22.58%

Year 2000 National Health Objectives

Reduce cigarette smoking to a prevalence of no more than 15% among people aged 20 and older. (Objective 3.4)

Increase to at least 50% the proportion of cigarette smokers aged 18 and older who stopped smoking cigarettes for at least one day during the preceding year. (Objective 3.6)

Table 10

Prevalence of Cigarette Smoking by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	**230**	**31.8**	**723**
Female	**225**	**25.7**	**812**
Age			
18-24	45	38	129
25-34	114	27	357
35-44	150	29	493
45-54	87	29	278
55-64	34	23	147
65+	23	21	129
Unknown or Refused	2	◆◆	2
Education			
Never Attended School	2	◆◆	15
Elementary	18	45	56
Some High School	53	48	108
High School Graduate or GED	173	37	483
Some College or Technical School	156	31	493
College Graduate	50	10	375
Unknown/Refused	3	◆◆	5
TOTAL	**455**	**28.9**	**1,535**

95% Confidence Interval (25.5 - 32.3%)

◆◆ = Not Reported

n = Number of respondents who are current regular and irregular smokers.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Smokeless Tobacco Use

Health Risk

Oral cancer has been shown to occur several times more frequently among smokeless tobacco users than among nonusers and may be 50 times as frequent among long-term snuff users.

The consumption of smokeless tobacco in the United States increased 40% between 1970 and 1986. Most new users of smokeless tobacco products are adolescent males. In 1988, 6.6% of males aged 12 through 17 had used some form of smokeless tobacco in the preceding month. The prevalence of smokeless tobacco use among males aged 18 through 24 was 8.9% in 1987. Between 1970 and 1986, the prevalence of snuff use increased fifteenfold and chewing tobacco use increased more than fourfold among men aged 17 through 19.

All smokeless tobacco products contain substantial amounts of nicotine; their use can support nicotine dependence and may lead to cigarette use.

Smokeless Tobacco Use in Alaska

Of all Alaskan adults, 30.4% reported to have ever used or tried chewing tobacco or snuff or both. Of men, 49.7% had used or tried such products, and 8.2% of women.

Among Alaskan adults, 5.6% were current smokeless tobacco users. The prevalence of smokeless tobacco use was higher among males (9.5%) than females (1.3%).

Among the 18 to 24 year old males, 7% used smokeless tobacco and among the 18 to 24 year old females 3% used smokeless tobacco.

Year 2000 National Health Objective

Reduce smokeless tobacco use by males aged 12 to 24 to a prevalence of no more than 4%. (Objective 3.9)

At Risk for Smokeless Tobacco Use

By age and gender

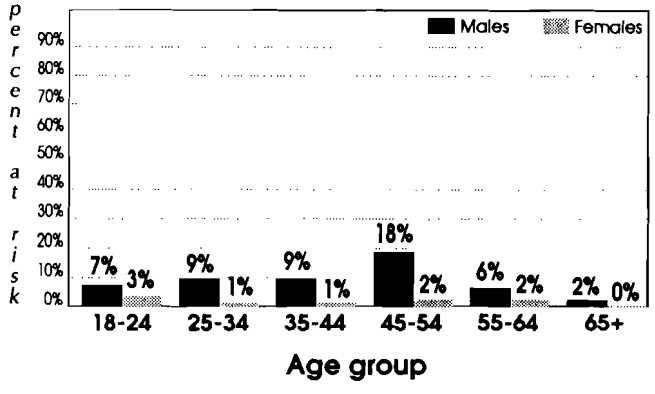


Table 11

Prevalence of Smokeless Tobacco Use by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	77	9.5	723
Female	14	1.3	812
Age			
18-24	9	5	129
25-34	24	5	357
35-44	28	5	493
45-54	21	11	278
55-64	6	4	147
65+	3	1	129
Unknown or Refused	—	—	2
Education			
Never Attended School	—	—	15
Elementary	8	14	56
Some High School	6	4	108
High School Graduate or GED	34	8	483
Some College or Technical School	31	5	493
College Graduate	12	3	375
Unknown/Refused	—	—	5
TOTAL	**91**	**5.6**	**1,535**

n = Number of respondents who are current smokeless tobacco users.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Preventive Health Practices

Overview

The effectiveness of preventive services in reducing disease and premature death is now well documented. There have been dramatic declines for stroke mortality, cervical cancer mortality, and childhood infectious diseases because of the widespread application of such preventive services as high blood pressure detection and control, pap tests, and childhood immunizations. Other preventive services such as mammography have also been shown to be effective.

Many Americans lack access to an ongoing source of primary care, and therefore, to essential clinical preventive services as well as to other health care.

Millions of Americans are without any form of health insurance and many more are underinsured. For a variety of reasons, in many areas, access to primary care is limited by an inadequate supply of primary care providers.

Even when access to primary care is not an issue, many preventive services are not offered by health care providers at regular intervals and few preventive services are covered under existing insurance plans despite their proven effectiveness in improving health.

Health Care Coverage and Health Checkups in Alaska

It was estimated that 82.6% of Alaskan adults had some kind of health care plan. According to this survey, 17% of Alaskan adults did not (National BRFSS Range 5.92 to 20.94%, National BRFSS Median 12.60%).

Of the persons with no health care plan, 18% reported that they had not had health care coverage for over 5 years, 17% had not had health care coverage for two to less than five years, 17% had not had health care coverage for one to two years and 32% had not had health care coverage for less than one year.

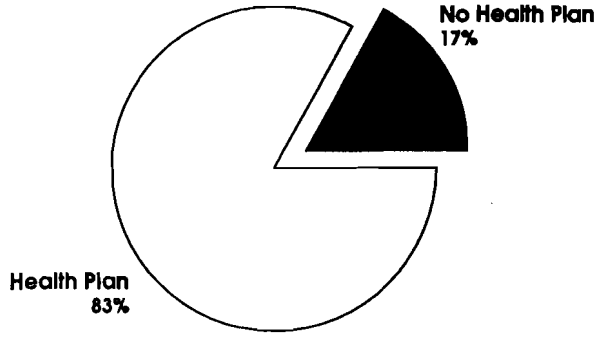
In total, 14.6% of Alaskan adults reported needing to see a doctor in the last year, but could not due to the cost. Of Alaskan females, 16.7% reported not being able to see a doctor due to the cost compared to 12.8% of Alaskan males.

In total, 63.2% of Alaskan adults had visited a doctor within the last year for a routine checkup, even though they were feeling well and had not been sick. Of Alaskan males, 53% had visited a doctor for a routine checkup in the last year compared to 74.8% of females.

Year 2000 National Health Objective

Increase to at least 95 percent the proportion of people who have a specific source of ongoing primary care for coordination of their preventive and episodic health care. (Objective 21.3)

Alaskan Adults with No Health Care Plan



Routine Checkup by a Doctor within the Past Year

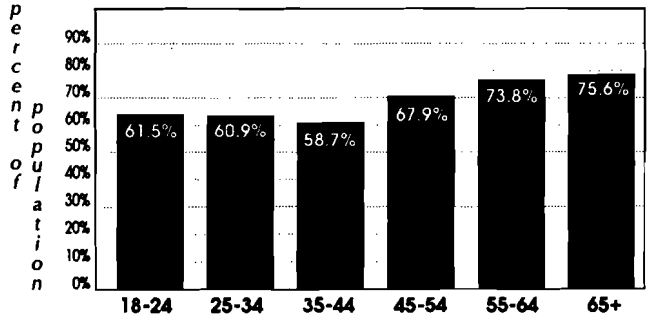


Table 12

Prevalence of No Health Care Plan by Selected Demographics

Alaska BRFSS 1994

	n	%	N
Gender			
Male	119	19.3	723
Female	112	14.3	812
Age			
18-24	34	29	129
25-34	63	20	357
35-44	72	13	493
45-54	43	12	278
55-64	14	12	147
65+	5	7	129
Unknown/Refused	—	—	2
Education			
Never Attended School	2	◆◆	15
Elementary	6	15	56
Some High School	27	21	108
High School Graduate or GED	81	21	483
Some College or Technical School	76	18	493
College Graduate	39	11	375
Unknown/Refused	—	—	5
TOTAL	**231**	**17.0**	**1,535**

95% Confidence Interval (14.0 - 20.0%)

◆◆ = Not Reported

n = Number of persons who report having no kind of health care plan.

% = This is a weighted (adjusted) percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup. Total sample size = 1535.

Breast Cancer Screening

Health Risk

Breast cancer is the second leading cause of cancer death among women and accounts for nearly a third of all cancers in women. Approximately one woman in every nine will develop breast cancer in her lifetime. The risk of breast cancer increases with age.

The National Cancer Institute reports that there is general consensus among experts that routine screening every year with mammography and clinical breast examination can reduce breast cancer mortality by about one third for women ages 50 and older. Experts do not agree on the role of mammography for women ages 40–49. To date, randomized clinical trials have not shown a statistically significant reduction in mortality for women under the age of 50. Annual clinical breast exam is recommended for women beginning at age 40.

Breast Cancer Screening in Alaska

Definitions used in this survey:

Clinical Breast Exams: *A clinical breast exam is when the breast is felt for lumps by a doctor or other medical professional.* Of women aged 18 and older, 94.7% had ever had a clinical breast exam. Of those women who had ever had a breast exam, 78.5% had one within the past year and an additional 12.4% had one in the previous year.

Mammography: *A mammogram is an x-ray of the breast to look for cancer.* Of women aged 40 and older, 82% had ever had a mammogram (National BRFSS Range 69.65 to 86.66%, National BRFSS Median 79.60%).

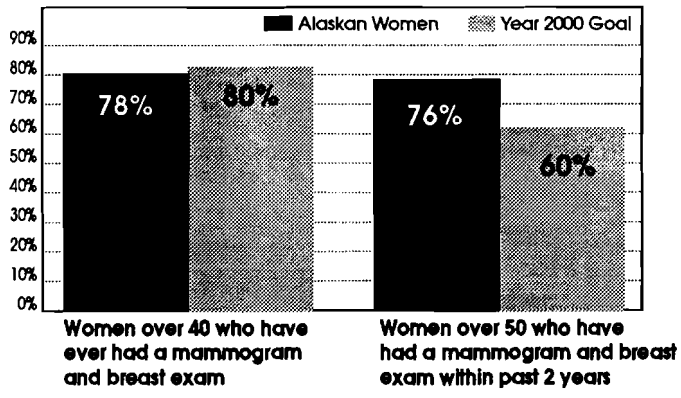
Of all the women 18 and older, 47.8% had ever had a mammogram. Of those women 18 and older who ever had a mammogram, 77% reported their last one was done as part of a routine checkup, 21% reported it was done because of a breast problem and 2% because they had breast cancer.

In 1994, 78.1% of women 40 and older, had ever had both a mammogram and a breast exam (National BRFSS Range 63.70 to 82.91%, National BRFSS Median 75.08%). Of the women 50 and older, 76% had a mammogram and a breast exam in the past two years (National BRFSS Range 48.37 to 76.01%, National BRFSS Median 62.12%).

Year 2000 National Health Objective

Increase to at least 80% the proportion of women aged 40 and older who have ever received a clinical breast exam and a mammogram, and to at least 60% those aged 50 and older who have received them within the preceding one to two years. (Objective 16.11)

Mammography and Breast Exams



Cervical Cancer Screening

Health Risk

Cervical cancer now kills an estimated 4,900 women annually in the United States, and about 15,700 new cases of cervical cancer are diagnosed each year. The incidence of invasive cervical cancer has steadily decreased over the years. Cervical carcinoma in situ, (a precancerous condition) is now more frequent than invasive cancer, especially in women under 50. The pap test is highly effective in detecting early cancer of the uterine cervix and greatly reduces the risk of mortality from invasive cervical cancer.

The National Cancer Institute recommends an annual pelvic examination with a pap test for all women who are or who have been sexually active, or who have reached age 18; and less frequent exams after three consecutive normal exams at the discretion of the physician.

Cervical Cancer Screening in Alaska

Definition used in this survey: Females with intact cervix-uteri who report they have had a pap smear within the past three years.

Of Alaskan females aged 18 and older (with intact cervix-uteri), 95.4% had ever had a pap test (National BRFSS Range 86.47 to 96.57%, National BRFSS Median 94.13%). According to this definition, 89.8% of women ages 18 and older (with intact cervix-uteri) had a pap test within the past three years (National BRFSS Range 77.64 to 90.73%, National BRFSS Median 84.87%).

Of the women aged 18 and older who had ever had a pap test, 77% were in the last year, 11.6% in the last one to two years, 5.5% within the past two to five years and 5.4% were more than five years ago.

Year 2000 National Health Objective

Increase to at least 95% the proportion of women aged 18 and older with uterine cervix who have ever received a pap test, and to at least 85% those who received a pap test within the preceding one to three years. (Objective 16.12)

HIV/AIDS Beliefs and Opinions

An estimated 650,000 — 900,000 people in the United States are presently infected with HIV (human immunodeficiency virus); and approximately 40,000 have been infected yearly in recent years. HIV and AIDS (acquired immunodeficiency syndrome) continue to threaten the health of the nation and will continue to make increasing demands on health and social service systems for many decades.

Through June 30, 1996, 345 Alaskans had been confirmed to have AIDS. Of these, 191 were known to have died. Data from HIV antibody testing conducted through the State Section of Laboratories through June 30,1996, showed that 620 (0.7%) of the 94,010 persons voluntarily tested were positive for HIV infection. Of the 14,538 individuals screened in Alaska between October 1985 and March 1996, as part of their entrance evaluation into military duty or reserve service, 3 (0.02%) tested positive.

AIDS information and education programs have increased public knowledge and influenced attitudes about HIV and AIDS. However, some misinformation about transmission of HIV still persists at all levels of society. An important step toward reducing the spread of HIV behaviors is for people to be able to use information about how HIV is transmitted to assess their own risk of becoming infected. When people can recognize their risks, they can learn ways to change their behavior and reduce their risk.

Behavioral Risk Factor Survey

In 1994, only the survey respondents aged 18-64 were asked the HIV and AIDS questions.

The majority of adults (69.4%) would be willing to work with a person who has the AIDS virus and 70.1% would allow their child to be in the same classroom with a child who is infected with the AIDS virus.

Over half (55%) of Alaskan adults believed that a condom is somewhat effective in preventing getting the AIDS virus through sexual activity and 29.3% thought that it is very effective. Most (88.3%) adults said that if they had a sexually active teenager, they would encourage him or her to use a condom.

Most (89.7%) Alaskan adults believed their chance of getting the AIDS virus was low or none. Most (82.2%) Alaskan adults thought that their chance of getting the AIDS virus had stayed the same in the past five years, 6.2% thought their chances had increased during the past five years and 8.2% thought their chances had decreased during the past five years.

Other than being tested when they were donating blood, 47.7% of Alaskan adults had been tested for HIV.

The majority of respondents (81.5%) reported that if they had a child in school, AIDS education should begin in school in Kindergarten to the sixth grade.

Alaskan Beliefs and Opinions About AIDS ◆

Would you be willing to work next to or near a person you know is infected with the AIDS virus?

Yes 69.4%
No 16.5%
Unknown/Refused 14.1%

Would you allow your child to be in the same classroom with a child who is infected with the AIDS virus?

Yes 70.1%
No 13.4%
(National BRFSS Range 6.84 - 24.70%, National Median 13.46%)
Unknown/Refused 16.5%

If you had a sexually active teenager, would you encourage him or her to use a condom?

Yes 88.3%
(National BRFSS Range 74.58 - 92.80%, National Median 87.12%)
No 3.0%
Would give other advice.....5.6%
Unknown/Refused 3.1%

How effective do you think using a condom is in preventing getting the AIDS virus through sexual activity?

Very effective 29.3%
(National BRFSS Range 17.48 - 47.40%, National Median 28.54%)
Somewhat effective 55.0%
Not at all effective..... 7.4%
Did not know how effective .. 5.9%
Unknown/Refused 2.5%

What are your chances of getting the AIDS virus?

High 1.8%
Medium 5.9%
Low 34.5%
None..... 55.2%
Unknown/Refused 2.5%

In the past year, have your chances of getting the AIDS virus, increased, decreased or stayed the same?

Increased..... 6.2%
(National BRFSS Range 3.52 - 10.95%, National BRFSS Median 6.22%)
Decreased.....8.2%
Stayed the Same..... 82.2%
Unknown/Refused 3.4%

Except for donating blood, have you ever had your blood tested for the AIDS virus infection?

Yes 47.7%
(National BRFSS Range 21.79 - 47.95%, National Median 33.38%)
No..... 49.4%
Unknown/Refused 2.9%

When was your last test? (of 596 respondents tested)

1980 - 1987 ..... 2.2%
1988 - 1991 ..... 22.5%
1992 - 1994 ..... 69.1%
Unknown/Refused 6.1%

◆ *Denominator equals 1,406 respondents aged 18-64.*

Did you receive counseling after getting the results of your last test? (of 487 respondents who were tested and received their results)

Yes	24%
No	75%
Unknown/Refused	1%

What was the main reason you had your last AIDS blood test? (of 596 respondents tested)

To see if infected	24.9%
Military	16.8%
Routine checkup	15.1%
Pregnancy test	8.5%
Insurance	7.5%
Hospitalization	4.8%
Employment	4.3%
Blood donation process	3.3%
Occupational exposure	2.9%
Illness	2.8%
Marriage license	2.0%
Immigration	1.2%
Other	4.6%
Unknown/ Refused	1.2%

Where did you have your last blood test for the AIDS virus? (of 596 respondents)

Hospital or emergency room	23.2%
Military site	22.6%
Private doctor	21.4%
Community health clinic	9.3%
Health department or other public clinic	6.9%
Insurance or company clinic	5.0%
Blood bank	2.7%
Family planning or prenatal clinic	1.9%
AIDS or STD clinic	1.0%
At home/health worker	1.0%
Other	3.8%
Unknown/ Refused	0.8%

If you had a child in school, in what grade do you think he or she should begin AIDS education?

Kindergarten	**15.3%**
1st - 3rd grade	**28.5%**
4th - 6th grade	**37.7%**
7th - 9th grade	**7.5%**
10th - 12th grade	**0.5%**
Don't know or refused	**8.2%**
Never	**2.2%**

Risks by Region

This section provides summary tables of the prevalence of behavioral health risks for each of the four BRFSS regions in Alaska (see Appendix B). This section also provides a comparison of risk factors by region.

Please note the following:

- Prevalence estimates for each region are weighted to the 18 and older population of the respective region. (See Appendix C)
- Prevalence estimates are based on denominators of less than 500 (approximately 384) and are therefore rounded to the nearest whole percent.
- It is important to consider the confidence intervals when comparing prevalence estimates. Generally speaking, the smaller the sample size, the wider the range of values within which the true prevalence is believed to be.

Definitions for Tables 13 – 23

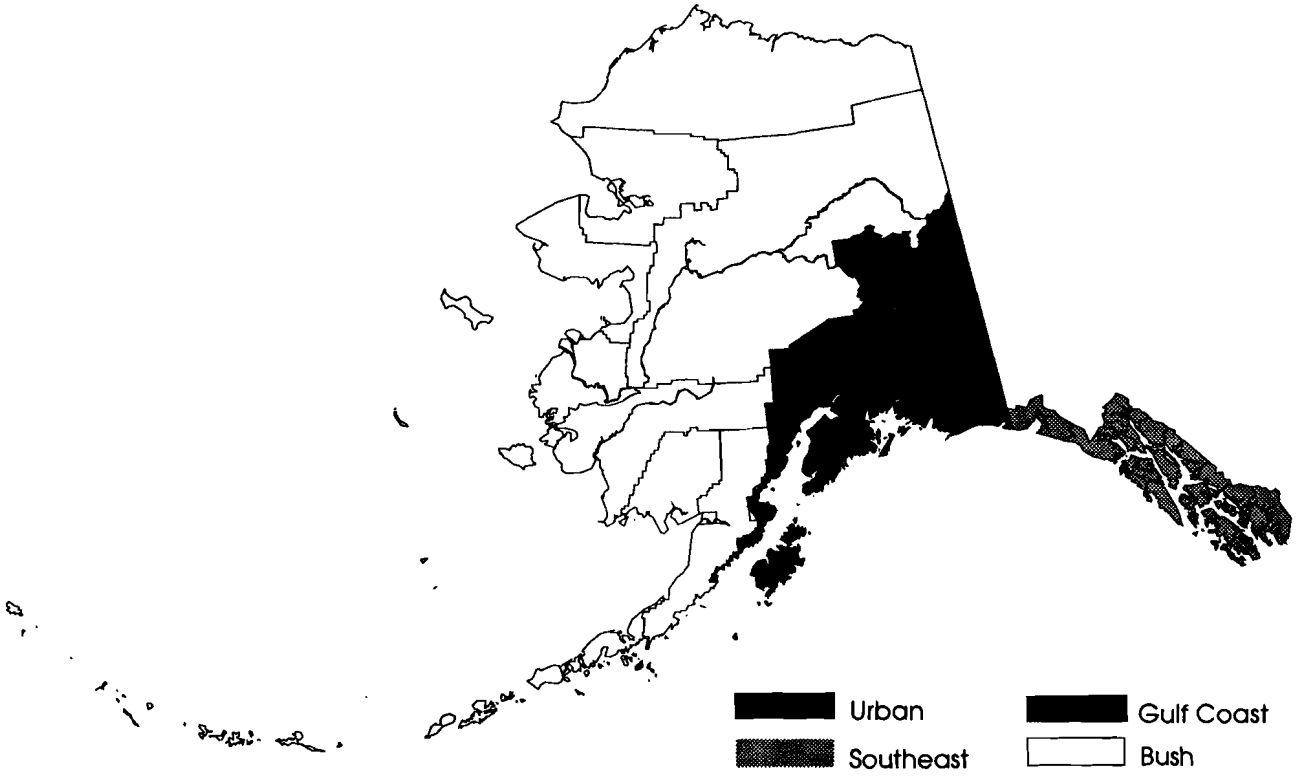
n = Number of respondents at risk.

% = This is a weighted (adjusted) percentage of the strata population at risk in this demographic subgroup, based on the survey data.

N = Total number of respondents in this subgroup, in this region.

95% C.I. = 95% Confidence Interval. The range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

1994 BRFSS Sampling Regions



The Alaska sample was stratified into four regions based on common demographics: •

	Total Population••	Population 18 years and older	Number of interviews conducted
Urban (Region 1) Anchorage, Fairbanks & vicinity	349,654	242,103	383
Gulf Coast (Region 2) Kenai, Kodiak, Valdez, Cordova & vicinity	64,063	43,574	384
Southeast (Region 3) All of Southeast Alaska	68,989	48,103	384
Bush (Region 4) All other nonurban areas of Alaska	67,337	43,393	384
STATEWIDE TOTAL	**550,043**	**377,173**	**1,535**

• See Appendix B

•• 1990 Census Population

Table 13

Regional Summary
Prevalence of Select Risk Factors
Urban (Region 1)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	63	34	186	26.5 - 41.9
Female	25	14	197	8.6 - 19.4
Total	88	25	383	19.6 - 29.5
Chronic Drinking				
Male	18	9	186	4.6 - 14.0
Female	5	2	197	0.2 - 3.6
Total	23	6	383	3.1 - 8.4
Overweight (2)				
Male	57	30	186	22.9 - 37.6
Female	52	24	197	17.2 - 29.9
Total	109	27	383	22.1 - 31.9
Sedentary Lifestyle				
Male	84	44	186	35.7 - 51.3
Female	98	50	197	41.9 - 57.2
Total	182	46	383	40.9 - 51.9
Physically Inactive				
Male	40	19	186	13.4 - 25.3
Female	48	24	197	17.0 - 29.9
Total	88	21	383	16.9 - 25.7
Current Smoking				
Male	57	31	186	23.7 - 38.6
Female	52	25	197	18.1 - 31.0
Total	109	28	383	23.0 - 33.0
No Health Care Plan				
Male	36	22	186	14.6 - 28.5
Female	26	14	197	8.9 - 19.6
Total	62	18	383	13.6 - 22.5

Table 14

Regional Summary
Prevalence of Select Risk Factors
Gulf Coast (Region 2)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	55	37	172	28.1 - 45.0
Female	21	10	212	5.5 - 14.1
Total	76	24	384	19.0 - 29.8
Chronic Drinking				
Male	12	6	172	2.6 - 10.0
Female	2	1	212	0.0 - 2.2
Total	14	4	384	1.7 - 6.0
Overweight (2)				
Male	47	28	172	20.3 - 35.1
Female	54	26	212	19.5 - 32.7
Total	101	27	384	22.0 - 32.0
Sedentary Lifestyle				
Male	91	53	172	44.8 - 61.6
Female	109	50	212	42.7 - 57.6
Total	200	52	384	46.1 - 57.5
Physically Inactive				
Male	42	26	172	18.4 - 33.5
Female	54	23	212	17.1 - 29.2
Total	96	25	384	19.7 - 29.6
Current Smoking				
Male	54	32	172	24.0 - 39.5
Female	64	29	212	21.9 - 35.2
Total	118	30	384	25.1 - 35.5
No Health Care Plan				
Male	34	20	172	13.2 - 26.4
Female	44	21	212	14.7 - 26.8
Total	78	20	384	15.7 - 24.8

Table 15

Regional Summary
Prevalence of Select Risk Factors
Southeast (Region 3)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	54	34	181	26.1 - 41.7
Female	28	13	203	8.2 - 18.1
Total	82	24	384	19.1 - 29.0
Chronic Drinking				
Male	10	7	181	2.4 -11.1
Female	5	2	203	0.2 - 4.3
Total	15	5	384	2.1 - 7.2
Overweight (2)				
Male	66	37	181	29.6 - 44.9
Female	74	33	203	26.3 - 40.3
Total	140	35	384	30.1 - 40.6
Sedentary Lifestyle				
Male	80	46	181	37.5 - 53.4
Female	97	47	203	39.4 - 54.5
Total	177	46	384	40.7 - 51.6
Physically Inactive				
Male	41	20	181	13.7 - 25.7
Female	45	22	203	15.5 - 27.9
Total	86	21	384	16.4 - 24.9
Current Smoking				
Male	47	26	181	19.2 - 33.3
Female	51	27	203	19.7 - 33.2
Total	98	26	384	21.5 - 31.3
No Health Care Plan				
Male	21	13	181	7.1 - 18.6
Female	19	11	203	5.7 - 15.3
Total	40	12	384	7.9 - 15.5

Table 16

Regional Summary
Prevalence of Select Risk Factors
Bush (Region 4)

Risk Factor	n	%	N	95% C.I.
Acute (Binge) Drinking				
Male	51	30	184	20.8 - 39.2
Female	23	12	200	6.4 - 16.9
Total	74	22	384	16.3 - 28.3
Chronic Drinking				
Male	9	4	184	0.6 - 6.8
Female	1	1	200	0.0 - 2.1
Total	10	2	384	0.5 - 4.3
Overweight (2)				
Male	53	22	184	15.1 - 28.4
Female	72	36	200	28.6 - 44.0
Total	125	28	384	22.6 - 33.0
Sedentary Lifestyle				
Male	107	54	184	43.9 - 63.2
Female	116	62	200	53.8 - 69.4
Total	223	57	384	50.3 - 63.5
Physically Inactive				
Male	63	32	184	23.9 - 40.6
Female	58	31	200	23.7 - 39.0
Total	121	32	384	26.1 - 37.7
Current Smoking				
Male	72	40	184	31.1 - 49.3
Female	58	29	200	21.7 - 36.8
Total	130	36	384	29.5 - 41.8
No Health Care Plan				
Male	28	14	184	8.2 - 20.6
Female	23	12	200	6.8 - 18.0
Total	51	14	384	9.3 - 17.9

Table 17

Acute (Binge) Drinking by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	63	34	186	26.5 - 41.9
Female	25	14	197	8.6 - 19.4
Total	88	25	383	19.6 - 29.5
Gulf Coast (Region 2)				
Male	55	37	172	28.1 - 45.0
Female	21	10	212	5.5 - 14.1
Total	76	24	384	19.0 - 29.8
Southeast (Region 3)				
Male	54	34	181	26.1 - 41.7
Female	28	13	203	8.2 - 18.1
Total	82	24	384	19.1 - 29.0
Bush (Region 4)				
Male	51	30	184	20.8 - 39.2
Female	23	12	200	6.4 - 16.9
Total	74	22	384	16.3 - 28.3

Comparison of Risk Prevalence for Acute (Binge) Drinking by Region

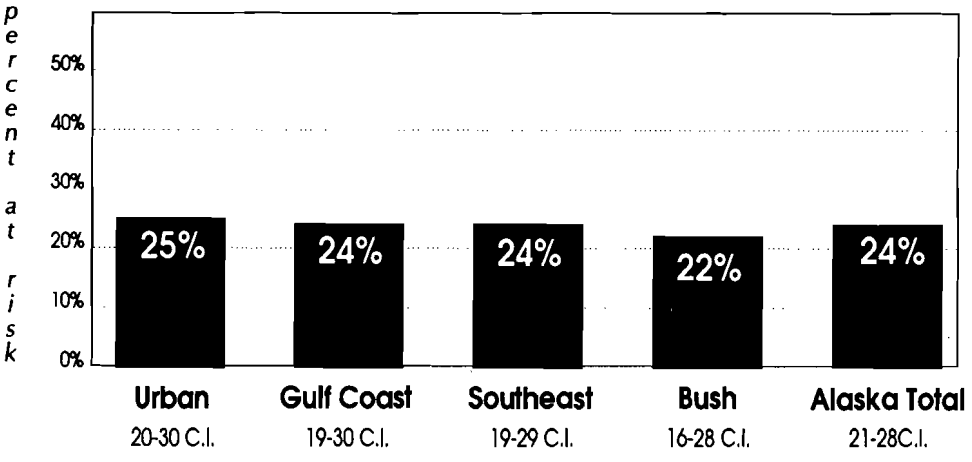


Table 18

Chronic Drinking by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	18	9	186	4.6 - 14.0
Female	5	2	197	0.2 - 3.6
Total	23	6	383	3.1 - 8.4
Gulf Coast (Region 2)				
Male	12	6	172	2.6 - 10.0
Female	2	1	212	0.0 - 2.2
Total	14	4	384	1.7 - 6.0
Southeast (Region 3)				
Male	10	7	181	2.4 - 11.1
Female	5	2	203	0.2 - 4.3
Total	15	5	384	2.1 - 7.2
Bush (Region 4)				
Male	9	4	184	0.6 - 6.8
Female	1	1	200	0.0 - 2.1
Total	10	2	384	0.5 - 4.3

Comparison of Risk Prevalence for Chronic Drinking by Region

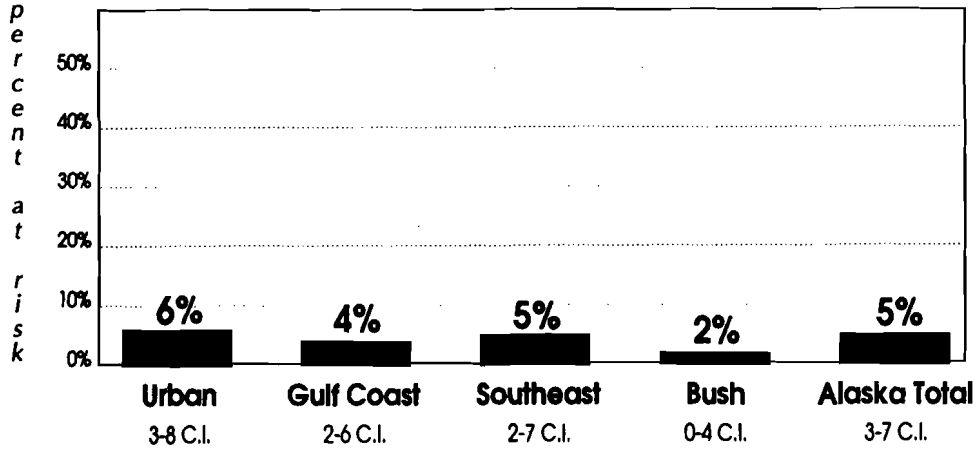


Table 19

Overweight (2) by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	57	30	186	22.9 - 37.6
Female	52	24	197	17.2 - 29.9
Total	109	27	383	22.1 - 31.9
Gulf Coast (Region 2)				
Male	47	28	172	20.3 - 35.1
Female	54	26	212	19.5 - 32.7
Total	101	27	384	22.0 - 32.0
Southeast (Region 3)				
Male	66	37	181	29.6 - 44.9
Female	74	33	203	26.3 - 40.3
Total	140	35	384	30.1 - 40.6
Bush (Region 4)				
Male	53	22	184	15.1 - 28.4
Female	72	36	200	28.6 - 44.0
Total	125	28	384	22.6 - 33.0

Comparison of Risk Prevalence for Overweight (2)

by Region

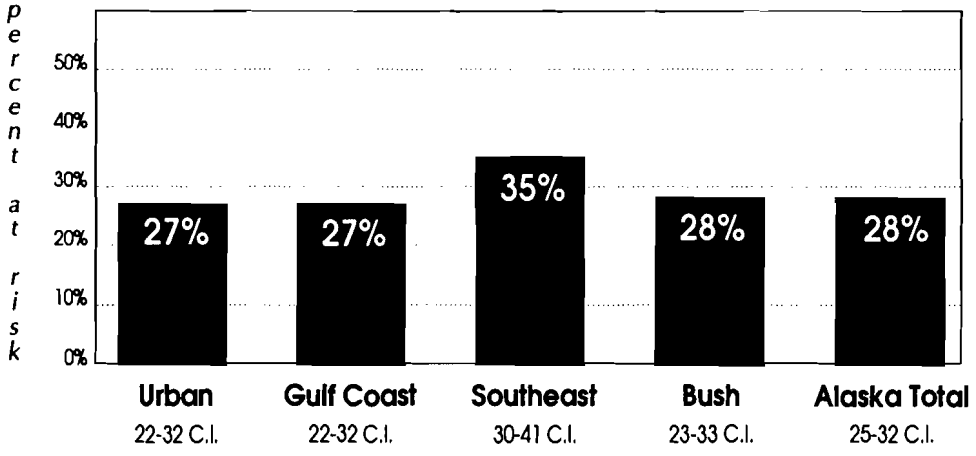


Table 20

Sedentary Lifestyle by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	84	44	186	35.7 - 51.3
Female	98	50	197	41.9 - 57.2
Total	182	46	383	40.9 - 51.9
Gulf Coast (Region 2)				
Male	91	53	172	44.8 - 61.6
Female	109	50	212	42.7 - 57.6
Total	200	52	384	46.1 - 57.5
Southeast (Region 3)				
Male	80	46	181	37.5 - 53.4
Female	97	47	203	39.4 - 54.5
Total	177	46	384	40.7 - 51.6
Bush (Region 4)				
Male	107	54	184	43.9 - 63.2
Female	116	62	200	53.8 - 69.4
Total	223	57	384	50.3 - 63.5

Comparison of Risk Prevalence for Sedentary Lifestyle by Region

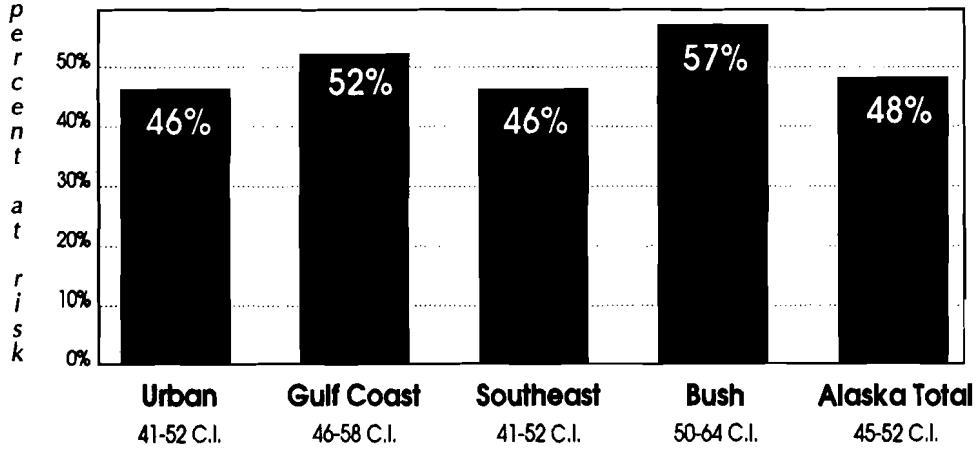


Table 21

Physically Inactive by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	40	19	186	13.4 - 25.3
Female	48	24	197	17.0 - 29.9
Total	88	21	383	16.9 - 25.7
Gulf Coast (Region 2)				
Male	42	26	172	18.4 - 33.5
Female	54	23	212	17.1 - 29.2
Total	96	25	384	19.7 - 29.6
Southeast (Region 3)				
Male	41	20	181	13.7 - 25.7
Female	45	22	203	15.5 - 27.9
Total	86	21	384	16.4 - 24.9
Bush (Region 4)				
Male	63	32	184	23.9 - 40.6
Female	58	31	200	23.7 - 39.0
Total	121	32	384	26.1 - 37.7

Comparison of Risk Prevalence for Physically Inactive by Region

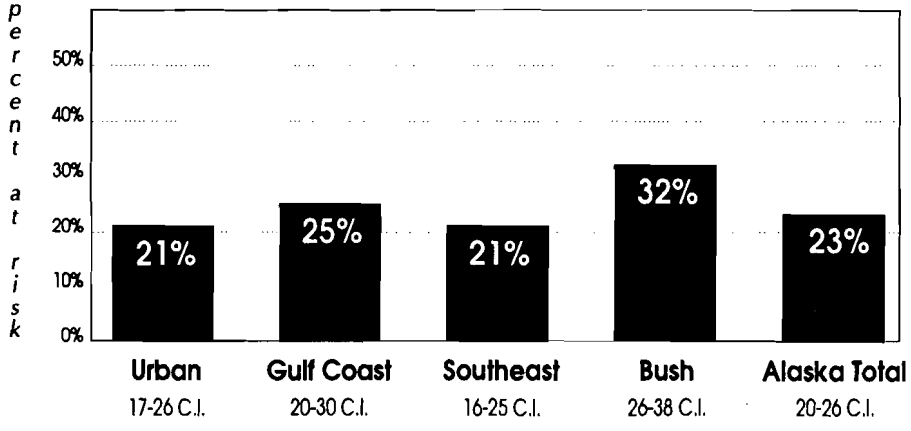


Table 22

Current Smoking by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	57	31	186	23.7 - 38.6
Female	52	25	197	18.1 - 31.0
Total	109	28	383	23.0 - 33.0
Gulf Coast (Region 2)				
Male	54	32	172	24.0 - 39.5
Female	64	29	212	21.9 - 35.2
Total	118	30	384	25.1 - 35.5
Southeast (Region 3)				
Male	47	26	181	19.2 - 33.3
Female	51	27	203	19.7 - 33.2
Total	98	26	384	21.5 - 31.3
Bush (Region 4)				
Male	72	40	184	31.1 - 49.3
Female	58	29	200	21.7 - 36.8
Total	130	36	384	29.5 - 41.8

Comparison of Risk Prevalence for Current Smoking

by Region

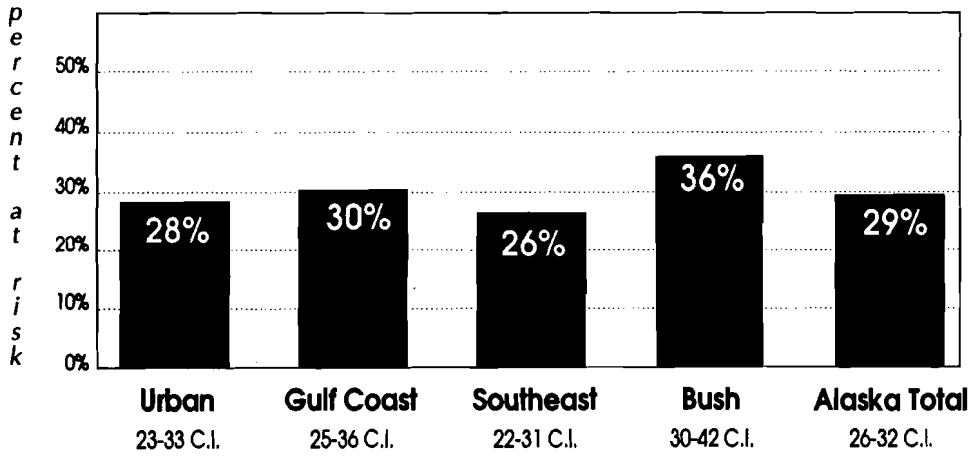


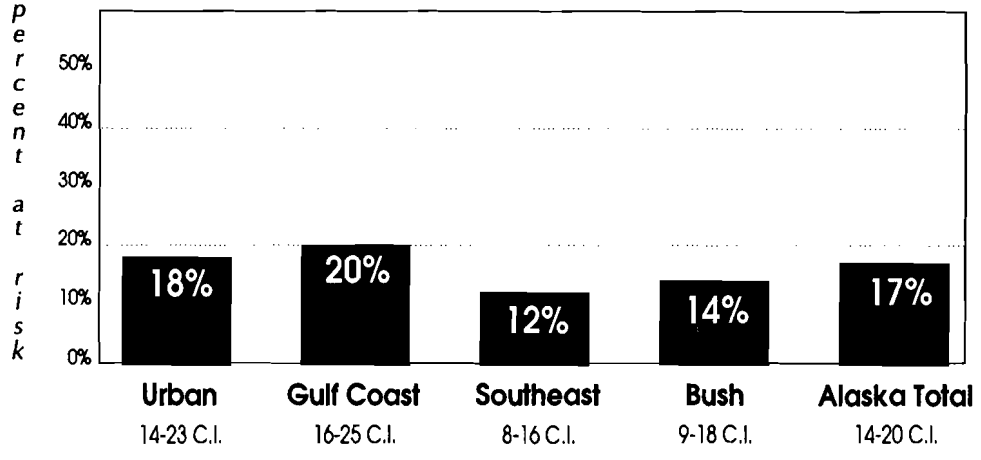
Table 23

No Health Care Plan by Region

Region	n	%	N	95% C.I.
Urban (Region 1)				
Male	36	22	186	14.6 - 28.5
Female	26	14	197	8.9 - 19.6
Total	62	18	383	13.6 - 22.5
Gulf Coast (Region 2)				
Male	34	20	172	13.2 - 26.4
Female	44	21	212	14.7 - 26.8
Total	78	20	384	15.7 - 24.8
Southeast (Region 3)				
Male	21	13	181	7.1 - 18.6
Female	19	11	203	5.7 - 15.3
Total	40	12	384	7.9 - 15.5
Bush (Region 4)				
Male	28	14	184	8.2 - 20.6
Female	23	12	200	6.8 - 18.0
Total	51	14	384	9.3 - 17.9

Comparison of Risk Prevalence for No Health Care Plan

by Region



Appendix A: BRFSS Definitions

Acute (Binge) Drinking Respondents who report having five or more drinks on an occasion, one or more times in the past month.

Chronic Drinking Respondents who report an average of 60 or more alcoholic drinks a month.

Current Smoking Respondents who report ever smoking 100 cigarettes and smoke now (regularly and irregularly).

Diabetes Awareness Respondents who report they were told by a doctor that they have diabetes.

Drinking and Driving Respondents who report having driven after having too much to drink, one or more times in the past month.

Mammogram Females 40 and older who report they ever had a mammogram.

Mammogram (2) Females 50 and older who report they have had a mammogram within the past two years.

Mammogram and Clinical Breast Exam Females 40 and older who report that they have ever had a mammogram and a breast exam.

Mammogram and Clinical Breast Exam (2) Females 50 and older who report they have had a mammogram and a breast exam in the past two years.

Overweight (1) Respondents at or above 120% of ideal weight. Ideal weight defined as the mid-value of a medium frame person from the 1959 metropolitan height-weight tables.

Overweight (2) Females with body mass index [weight in kilograms divided by height in meters squared (W/H**2)]>=27.3 and males with body mass index >= 27.8.

Pap Test Females with intact cervix-uteri who report they have ever had a pap smear test.

Physical Activity

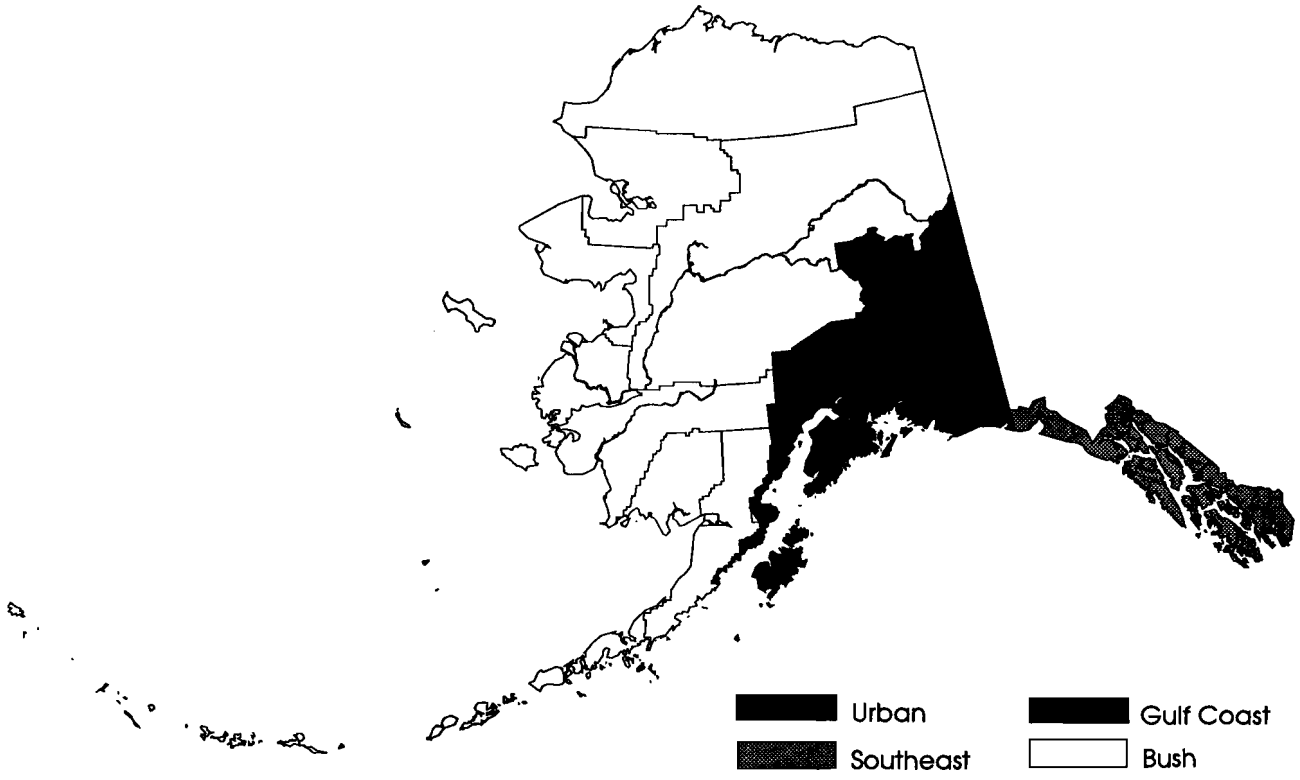
Physically Inactive Respondents who report no leisure time physical activity during the past month.

Regular and Sustained Physical Activity Respondents who report physical activity 5 or more sessions per week, 30 or more minutes per session, regardless of intensity.

Regular and Vigorous Physical Activity Respondents who report physical activity or pair of activities for 3 or more sessions per week, 20 minutes or more per session, at 50% or more capacity.

Sedentary Lifestyle: Respondents who report no activity or a physical activity or pair of activities that were done for 20 minutes or less, fewer than three times per week.

Appendix B-1: 1994 BRFSS Sampling Regions



The Alaska sample was stratified into four regions based on common demographics:

	Total Population**	Population 18 years and older	Number of interviews conducted
Urban (Region 1) Anchorage, Fairbanks & vicinity	349,654	242,103	383
Gulf Coast (Region 2) Kenai, Kodiak, Valdez, Cordova & vicinity	64,063	43,574	384
Southeast (Region 3) All of Southeast Alaska	68,989	48,103	384
Bush (Region 4) All other nonurban areas of Alaska	67,337	43,393	384
STATEWIDE TOTAL	**550,043**	**377,173**	**1,535**

** 1990 Census Population

Appendix B-2: Alaska BRFSS Sample Design◆

	Total Population	White	Alaska Native/ American Indian	Other	18 years and older
Urban (Region 1)					
Anchorage Borough	226,338	185,601	14,780	25,957	159,361
Fairbanks-Northstar	77,720	64,672	5,383	7,665	53,313
Matanuska-Susitna	39,683	37,114	1,952	617	25,631
Southeast Fairbanks	5,913	4,734	798	381	3,798
TOTAL	**349,654**	**292,121**	**22,913**	**34,620**	**242,103**
Gulf Coast (Region 2)					
Kenai Peninsula	40,802	37,220	2,942	640	27,370
Kodiak Island	13,309	9,467	2,162	1,680	9,153
Valdez Cordova	9,952	8,298	1,266	388	7,051
TOTAL	**64,063**	**54,985**	**6,370**	**2,708**	**43,574**
Southeast (Region 3)					
Haines Borough	2,117	1,817	282	18	1,525
Juneau Borough	26,751	21,765	3,509	1,477	18,889
Ketchikan Gateway	13,828	11,363	1,913	552	9,693
Prince of Wales	6,278	3,872	2,368	38	4,241
Sitka	8,588	6,406	1,805	377	5,955
Skagway, Yakutat, Angoon	4,385	2,662	1,681	42	2,947
Wrangell, Petersburg	7,042	5,565	1,370	107	4,853
TOTAL	**68,989**	**53,450**	**12,928**	**2,611**	**48,103**
Bush (Region 4)					
Aleutians East	2,464	909	1,052	503	1,911
Aleutian Islands	9,478	6,661	1,101	1,716	7,588
Bethel Census	13,656	2,122	11,379	155	8,325
Bristol Bay Borough	1,410	905	455	50	1,030
Dillingham	4,012	1,035	2,938	39	2,508
Lake and Peninsula Borough	1,668	392	1,263	13	1,036
Nome	8,288	2,064	6,157	67	5,119
North Slope Borough	5,979	1,307	4,344	328	3,734
Northwest Arctic	6,113	842	5,211	60	3,471
Wade Hampton	5,791	349	5,407	35	3,151
Yukon-Koyukuk	8,478	3,603	4,734	141	5,520
TOTAL	**67,337**	**20,189**	**44,041**	**3,107**	**43,393**
STATEWIDE TOTAL	**550,043**	**420,745**	**86,252**	**43,046**	**377,173**

◆ April 1990 MARS (Modified Age, Race and Sex Data) data, Alaska Department of Labor, Research and Analysis Section, Demographic Unit

Appendix C: Alaska BRFSS Region Description◆

Age	Total Population	Male	Female	White	Native	Other
Urban (Region 1)						
18-24	37,553	20,504	17,049	30,096	2,924	4,533
25-34	74,028	37,576	36,452	61,696	4,562	7,770
35-44	66,005	34,745	31,260	57,292	3,228	5,485
45-54	33,765	18,081	15,684	29,659	1,777	2,329
55-64	18,031	9,402	8,629	15,731	1,001	1,299
65+	12,721	5,816	6,905	10,972	713	1,036
TOTAL	**242,103**	**126,124**	**115,979**	**205,446**	**14,205**	**22,452**
Gulf Coast (Region 2)						
18-24	5,335	2,979	2,356	4,401	675	259
25-34	12,328	6,607	5,721	10,635	1,148	545
35-44	12,866	7,081	5,785	11,416	937	513
45-54	6,427	3,617	2,810	5,630	555	242
55-64	3,745	2,079	1,666	3,196	389	160
65+	2,873	1,462	1,411	2,416	348	109
TOTAL	**43,574**	**23,825**	**19,749**	**37,694**	**4,052**	**1,828**
Southeast (Region 3)						
18-24	5,703	3,045	2,658	4,065	1,430	208
25-34	13,178	6,824	6,354	10,400	2,233	545
35-44	13,584	7,226	6,358	11,442	1,706	436
45-54	7,660	4,272	3,388	6,377	1,074	209
55-64	4,107	2,212	1,895	3,200	740	167
65+	3,871	1,801	2,070	3,017	689	165
TOTAL	**48,103**	**25,380**	**22,723**	**38,501**	**7,872**	**1,730**
Bush (Region 4)						
18-24	8,048	4,742	3,306	2,685	4,711	652
25-34	13,982	8,174	5,808	5,320	7,661	1,001
35-44	9,993	5,976	4,017	4,422	5,005	566
45-54	5,392	3,124	2,268	2,151	3,033	208
55-64	3,348	1,889	1,459	849	2,383	116
65+	2,630	1,339	1,291	276	2,332	22
TOTAL	**43,393**	**25,244**	**18,149**	**15,703**	**25,125**	**2,565**

◆ April 1990 MARS (Modified Age, Race and Sex Data) data, Alaska Department of Labor, Research and Analysis Section, Demographic Unit

Appendix D: Alaska BRFSS 1994 Survey Population
by Age and Gender

Age	Male	Female	Total
Urban (Region1)			
18-24	18	23	41
25-34	55	45	100
35-44	59	55	114
45-54	29	38	67
55-64	15	22	37
65+	10	14	24
Unknown	0	0	0
TOTAL	**186**	**197**	**383**
Gulf Coast (Region 2)			
18-24	9	16	25
25-34	37	41	78
35-44	65	73	138
45-54	30	33	63
55-64	18	20	38
65+	13	29	42
Unknown	0	0	0
TOTAL	**172**	**212**	**384**
Southeast (Region 3)			
18-24	17	15	32
25-34	39	48	87
35-44	58	63	121
45-54	36	33	69
55-64	13	18	31
65+	18	25	43
Unknown	—	1	1
TOTAL	**181**	**203**	**384**
Bush (Region 4)			
18-24	11	20	31
25-34	43	49	92
35-44	56	64	120
45-54	43	36	79
55-64	24	17	41
65+	7	13	20
Unknown	—	1	1
TOTAL	**184**	**200**	**384**

Appendix E: Alaska BRFSS 1994 Survey Population

by Age and Race

Age	White	Native	Other	Unknown	Total
Urban (Region 1)					
18-24	33	3	5	—	41
25-34	86	3	11	—	100
35-44	97	8	8	1	114
45-54	58	5	3	1	67
55-64	32	2	3	—	37
65+	20	1	3	—	24
Unknown	0	0	0	—	0
TOTAL	**326**	**22**	**33**	**2**	**383**
Gulf Coast (Region 2)					
18-24	21	3	1	—	25
25-34	63	11	4	—	78
35-44	123	11	3	1	138
45-54	55	5	2	1	63
55-64	34	3	1	—	38
65+	36	3	3	—	42
Unknown	0	0	0	—	0
TOTAL	**332**	**36**	**14**	**2**	**384**
Southeast (Region 3)					
18-24	27	4	1	—	32
25-34	68	14	4	1	87
35-44	104	14	3	—	121
45-54	59	8	2	—	69
55-64	27	3	1	—	31
65+	36	3	4	—	43
Unknown	1	—	—	—	1
TOTAL	**322**	**46**	**15**	**1**	**384**
Bush (Region 4)					
18-24	9	21	1	—	31
25-34	41	47	3	1	92
35-44	65	50	5	—	120
45-54	41	35	3	—	79
55-64	24	17	—	—	41
65+	1	19	—	—	20
Unknown	1	—	—	—	1
TOTAL	**182**	**189**	**12**	**1**	**384**

Appendix F: Telephone Coverage In Alaska◆

	Occupied Housing	Number with Phones	Percent Total
Urban (Region 1)			
Anchorage Borough	82,702	79,890	96.59
Fairbanks-Northstar	26,693	24,960	93.50
Matanuska-Susitna	13,394	12,357	92.25
Southeast Fairbanks	1,909	1,521	79.67
TOTAL	**124,698**	**118,728**	**95.21**
Gulf Coast (Region 2)			
Kenai Peninsula	14,250	12,858	90.23
Kodiak Island	4,083	3,752	91.89
Valdez Cordova	3,425	2,834	82.74
TOTAL	**21,758**	**19,444**	**89.36**
Southeast (Region 3)			
Haines Borough	791	589	74.46
Juneau Borough	9,902	9,422	95.15
Ketchikan Gateway	5,030	4,720	93.83
Prince of Wales	2,061	1,404	68.12
Sitka	2,939	2,720	92.54
Skagway, Yakutat, Angoon	1,422	1,117	78.55
Wrangell, Petersburg	2,514	2,172	86.39
TOTAL	**24,659**	**22,144**	**89.80**
Bush (Region 4)			
Aleutians East	533	469	87.99
Aleutian Islands	1,845	1,674	90.73
Bethel Census	3,605	2,507	69.54
Bristol Bay Borough	407	366	89.92
Dillingham	1,215	1,006	82.79
Lake and Peninsula Borough	509	342	67.19
Nome	2,371	1,727	72.83
North Slope Borough	1,673	1,342	80.21
Northwest Arctic	1,526	1,031	67.56
Wade Hampton	1,368	722	52.77
Yukon-Koyukuk	2,748	1,683	61.24
TOTAL	**17,800**	**12,869**	**72.30**
STATEWIDE TOTAL	**188,915**	**173,185**	**91.67**

◆ Census of Population and Housing, 1990: Summary Tape File 2 (Alaska)

Appendix G: Alaska BRFSS Telephone Sample Generation

The statewide sample was stratified into four regions for the study. Within each region's sample, the proportion of interviews in each prefix is the same as the proportion of active residential lines in that prefix relative to all the active residential lines in the region.

The Institute of Social and Economic Research, University of Alaska, Anchorage (ISER) generates the statewide random telephone number sample using two different techniques:

- for large telephone exchanges and
- for small telephone exchanges.

For large exchanges (over 2,000 residential lines in most cases) a random telephone number generation program (RANDY) developed by Jim Kerr for Professor Jack Kruse. For small exchanges, residential numbers listed in the relevant telephone book are entered and numbers are randomly selected from this pool.

Large telephone exchanges

Randomly generated numbers

The advantage of randomly generated numbers is that:

- ✔ unlisted as well as listed numbers are included in the sample;
- ✔ with good information from the telephone utilities, it means many non-working and business numbers can be filtered out; and
- ✔ it is relatively inexpensive.

Generated numbers from RANDY

RANDY works by randomly selecting a prefix (from a list of relevant prefixes) and generating 48 suffixes (random 4–digit numbers) for it. Each line of prefix-plus-48-suffixes represents one interview. For each potential interview, 48 different suffixes are generated, so that even in the smallest prefixes, the line contains at least one working, residential number with residents willing to be interviewed. RANDY repeats this process until the sample size is achieved.

Information is collected from the telephone utilities on the number of active residential lines in each prefix. This information is used to determine the proportion of each prefix in the total sample.

To improve the "hit rate" (working residential numbers as a proportion of all numbers generated) information is also collected on blocks of numbers assigned to businesses, pay phones, or not assigned, so as to exclude these numbers.

The data collected is read into the program, which calculates the proportion of working telephone numbers in each prefix. Each proportion is expressed as a decimal between 0 and 1.

RANDY then begins the iterative process of generating the sample. Each iteration involves the following:

- A prefix is selected at random.
- RANDY randomly selects a number between 0 and 1, and compares it to the proportion calculated above for the selected prefix.
- If the random number is less than or equal to the prefix's proportion, the prefix is selected.
- If the random number is greater than the prefix's proportion, the prefix is dropped and the iteration starts over.
- Once a prefix is selected, RANDY generates random 4-digit suffixes, filtering out those that are known not to work, until it has generated 48 suffixes.
- The process is repeated until the desired sample is generated.

After RANDY has generated all the needed numbers, it uses a heap sort algorithm to index all the numbers (in this case, the entire 7-digit number, not just the 4-digit suffix). The program compares the numbers and the second and subsequent occurrences of any repeating numbers are deleted. These deleted numbers are not replaced.

Small telephone exchanges

Randomly selected numbers from entered sample

The reason entered numbers are used for small exchanges, is that in Alaska's smaller exchanges there may be fewer than 100 residential phones (sometimes fewer than ten). If large blocks of numbers cannot be excluded from the potential telephone numbers then generating random suffixes will produce only one in 100 (or even one in 1,000) working numbers (since for every telephone prefix there are 10,000 possible phone numbers).

Small exchanges would produce very low hit rates with randomly generated numbers, unless the utility assigned from only a small block of numbers, which is not usually the case. Two thousand active residential lines are chosen as the cutoff point for using random number generation. Using utility data, those exchanges are identified, and from the most recent available telephone books, all residential numbers listed in each small exchange are entered. Some of these small exchanges cannot be entered because some are included in with Anchorage exchanges. Therefore, even though they are quite small, they are in the randomly generated sample (and suffer a high rate of non-working numbers).

For each region, then, there is a file of all the listed residential telephone numbers in that region. Numbers are chosen from the file randomly and printed out in a list, which is slightly larger than the desired sample size. Enough numbers are included in the list to provide replacements for households which have recently moved (or disconnected their telephones for other reasons since phone book publication) and refusals. Because the file contains the entire universe of listed numbers, a sample randomly drawn from it is self-weighting; no adjustment is needed to provide the correct proportion from each prefix.

Appendix H: 1994 BRFSS Response Rates

Indicator	BRFSS Objective	BRFSS Median	Alaska Achieved
CASRO Response Rate	≥ 75	70.0	74.6
Upper Bound Rate	≥ 90	81.4	84.7
Percent Refusals	≤ 10	7.7	4.5

Response Rates

The response rate measures the extent to which interviews were completed from among the telephone numbers selected for the sample. The higher the response rate, the lower the potential will be for bias in the data. The two estimates that are used for BRFSS provide a combination of monitoring information that are useful for program management. The formulas are described as follows:

CASRO Response Rate

The response rate developed by the Council of American Survey Research Organizations (CASRO), apportions dispositions with unknown eligibility status (ring no answer and busy) to dispositions representing eligible respondents in the same proportion as exists among calls of known status (all other BRFSS call dispositions). The resulting estimate reflects telephone sampling efficiency and the degree of cooperation among eligibles contacted.

Upper Bound Response Rate

The most liberal of response rates formulas, the upper bound calculation includes only refusals, terminations and completed interviews. The resulting estimates reflects the cooperation of eligibles contacted and is not affected by differences in telephone sampling efficiency.

Refusals

The percentage of refusals of total dispositions in a given interviewing period is an indicator of both interviewer performance and degree of potential bias in the survey data. Ten percent or less is a generally acceptable standard.

Appendix I: Weighting

As used here, unweighted data are the actual responses of each respondent. By weighting the data, the responses of persons in various subgroups are adjusted to compensate for the over-representation or underrepresentation of these persons in the survey sample. Factors that are adjusted for include the following:

- The number of telephone numbers per household.
- The number of adults in a household.
- The demographic distribution of the sample.

The first two factors address the problem of unequal selection probability, which could result in a biased sample that doesn't really represent the population. For example, an interviewee in a one-adult household has four times the chance of being selected for an interview as does an adult in a four-adult household. A household with two telephone numbers has twice the chance of being dialed as a household with one telephone number. The first two factors are combined to compute a raw (or unadjusted) weight.

Data are then further weighted. Poststratification is the method used to adjust the distribution of the sample data so that it reflects the total population of the sampled area. The poststratification factor is calculated by computing the ratio of the age, race, and sex distribution of the state population divided by that of the survey sample. This factor is then multiplied by the raw weight to compute an adjusted, or final-weight, variable.

This procedure is repeated for each of four regions of Alaska. Since data is collected as a stratified sample, i.e. stratified per region of the state, weights are computed based on the sample and population distribution of each region. Data from all regions are combined to form the total state's data for Alaska.

Thus, this weighting adjusts not only for variation in selection and sampling probability, but also for demographic characteristics in each region of the state. If the data were not weighted, projections could not be made from the sample to the region or to the general population.

In 1994, survey results were weighted using 1990 Census data for Alaska from the U.S. Census Bureau, Population Division, Estimates Branch; Alaska Department of Labor, Research and Analysis, Demographic Unit.

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